AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

Musculoskeletal Module: **Mid Module Test**

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 26-03-2019

MARKS= 30
TIME = 40min

Q1.A) Enlist all the properties of nerve fiber.
B) Explain the property of conductivity in detail by comparing myelinated and non-myelinated nerve fiber? (2+3)

Q2.A) Classify nerve fibers according to their conduction velocity? (2+3)
B) Outline degenerative and regenerative changes in the distal stump of a nerve fiber?

Q3.A) Draw nerve fiber action potential, label all the phases and describe the ionic events involved in these phases.
B) Define refractory period, what are its types. Label the different types in above diagram of action potential. (3+2)

Q4.A) Define Resting membrane potential (RMP)? Describe the mechanism of its generation in a large myelinated nerve fiber?
B) What are the effects of hyper & hypocalcemia on the membrane excitability? (3+2)

Q5.Explain in detail with the help of a diagram the mechanism of transmission of nerve impulse across the NEUROMUSCULAR JUNCTION. (5)

Q6. Define the following (1+1+2+1)

1. Cronexie
2. All or none law
3. Summation
4. Graded potential

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

UNIT TEST; CELL PHYSIOLOGY

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 18-12-2017

MARKS= 30
TIME = 40min

Q1- A) Define "Control system" of the body? What are the different components of control system?
B) Outline different mechanisms of control system functioning?
C) Give comparison of feed forward and feed back mechanism? (1.5+1+2.5)

Q2- A) Draw and label the "fluid mosaic model" of cell membrane?
B) Describe the different functions of cell membrane proteins? (2.5+2.5)

Q3- A) Describe the structure and functions of mitochondria?
B) Name the different components of cytoskeleton & describe their functions? (2.5+2.5)

Q4- Define gene expression? Discuss the important steps of translation? (1 + 4)

Q5- Outline the different mechanisms of genetic regulation? (5)

Q6- Define the following? (2+1+1+1)

i. Compare between apoptosis & necrosis
ii. Micro RNA
iii. Gain of system
iv. Histone proteins

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

MID TERM TEST

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50
TIME = 1 hr 45 min

DATED: 26-05-2019

Q1.A) What is a control system? Give its components.
B) Explain feedback mechanism with the help of an example? (3+2)

Q2.A) Describe the mechanism of translation in detail?
B) Compare the functions of Lysosomes & Peroxisomes?
C) Define hyperkalemia and give its causes. (2.5+1.5+1.5)

Q3.A) Enlist the different modes of intracellular cell signaling?
B) Compare primary and secondary active transport with the help of examples. (3+2)

Q4. A) Enumerate all the properties of nerve fiber.
B) Compare the conductivity of a nerve in a myelinated and non-myelinated fiber.
C) Classify nerve fibers according to the conduction velocity and diameter. (1.5+1.5+2)

Q5. A) Explain the mechanism of origin of Resting membrane potential in a large myelinated nerve fiber. Elaborate the mechanism with required equations.
B) What is the effect of hypo & hyperkalemia on RMP? (3+2)

Q6. Enlist all the theories of skeletal muscle contraction. Explain in detail with the help of diagram the molecular mechanism of muscle contraction. (5)

Q7. A) Define anemia. Classify the different types of anemia?
B) Explain in detail the complete blood picture along with indices in case of megaloblastic anemia anemia? (3+2)

Q8. A) Define inflammation? Explain in detail the different line of defenses during inflammation? (2.5)
B) A 15 year old boy came to the emergency department with high grade fever, shivering & sore throat. Complete blood examination was done showing TLC= 15000/mm^3, ESR= 50 & Hb= 14gm/dl (0.5+1+1)

I. What is the most likely cause of this condition?
II. What are the substances released in inflammation that cause increased WBC count?
III. What is the composition of pus?

Q9. A) Give an account of role of Helper T cells in Active immunity?
B) Define allergy. Enlist all of its types with the help of examples. (2.5+2.5)

Q10. A) Define hemostasis and enlist the main steps involved in hemostasis?
B) Define Rh incompatibility. What disturbances may be present in the newborn suffering from erythroblastosis fetalis? (2.5+2.5)

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

3rd MODULE TEST; Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 60 **DATED: 22-05-2019**
TIME = 1 hr 10 min

Q1. A) Define anemia. Classify the different types of anemia? (3+2+5)
B) Explain in detail the complete blood picture along with indices in case of megaloblastic anemia anemia?
C) Enumerate the different stages of Erythropoisis & enlist all the factors regulating red blood cell production?

Q2. A) Define inflammation? Explain in detail the different line of defenses during inflammation? (3+3)
B) Describe the mechanism of cellular immunity in detail?
C) A 15 year old boy came to the emergency department with high grade fever, shivering & sore throat. Complete blood examination was done showing TLC= 15000/mm^3 , ESR= 50 & Hb= 14gm/dl (1+1+2)
I. What is the most likely cause of this condition?
II. What are the substances released in inflammation that cause increased WBC count?
III. What is the composition of pus?

Q3. A) Give an account of role of Helper T cells in Active immunity? (3+3+4)
B) Draw structure of antibody and enlist the methods of killing of bacteria by the antibodies?
C) Define allergy. Enlist all of its types with the help of examples.

Q4. A) Define hemostasis and enlist the main steps involved in hemostasis?
B) A 14 year old boy was brought to the emergency department with severe abdominal pain. An acute appendicitis was diagnosed and immediate surgery was advised. (3+1+2+2+2)
I. Which clotting mechanism will be involved in blood coagulation during surgery?
II. Give the mechanism of clotting involved in the above scenerio in cascade form?
III. Which investigation should be done before the surgical procedure regarding the hemophilic profile?
C) Describe the fibrinolytic system of blood clotting?

Q5. A) Enlist the transfusion reactions in case of mismatch blood transfusion? (3+3+4)
B) Define Rh incompatibility. What disturbances may be present in the newborn suffering from erythroblastosis fetalis?
C) Which type of blood groups are called Universal donor and universal recipient & why?

Q6. Define the following (2+2+2+2+2)
I. Polycythemia
II. Purpura
III. Hemophilia
IV. Heparin
V. Leukemia

M. Muz amil

ANATOMY DEPARTMENT
AZRA NAHEED MEDICAL COLLEGE, LAHORE
1st year MBBS Respiratory module assesments
Total time:100min Total Marks:50
Short Essay Questions (SEQs)

Date 2 -9-2019

Qno1- Define bronchopulmonary segments ?Draw& label bronchopulmonary segments of Left lung?(1+4)

Qno2 Intabulated form give openings of diaphragm with its contents and their vertebral level ?(5)

Qno 3 Give an account about different phases of lung development ?(5)

Qno4 What is tracheoesophageal fistula ? what are its different types ? give the embryological justification ? (1+2+2)

Qno5 Draw and label histological diagram of trachea (5)

Qno6 In tabulated form give the histological changes in terms of epithelium from nose to alveoli ?(5)

Qno7 Give origin, insertion, nerve supply andaction of diaphragm ?(5)

Qno8 A60 years old man presented in emergency department with complaint of breathlessness, on chest Xray pleural effusion is diagnosed .what are pleural recesses ? which border of rib is preffered during aspiration of pleural effusion justify your answer ? what is the nerve supply of pleura ?(2+2+1)

Qno9 Classify ribs ? what are different types of respiratory movement ? give the mechanism how diameter of thoracic cage changes ?(2+1+2)

Qno 10 a)Draw and label mediastinal surface of right lung (2.5)

b) Enlist the contents of intercostal space (2.5)

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

Module Test: Musculoskeletal

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50
TIME = 2 hours

DATED: 16-04-2019

Q1.A) Enumerate all the properties of nerve fiber. (1.5+1.5+2)
B) Compare the conductivity of a nerve in a myelinated and non-myelinated fiber.
C) Classify nerve fibers according to the conduction velocity and diameter.

Q2.A) Define synapse. Explain the different physiological types of synapse? (3+2)
B) Enlist all the properties of synapse.

Q3.A) Explain the mechanism of origin of Resting membrane potential in a large myelinated nerve fiber. Elaborate the mechanism with required equations. (3+2)
B) What is the effect of hypo & hyperkalemia on RMP?

Q4.A) Draw and label action potential in a large myelinated nerve fiber. Explain the ionic events involved in different phases of action potential.
B) Compare the Local potential with Action potential. (at least 4 points) (3+2)

Q5.A) A 20 year old man was brought to emergency department with trauma due to road side accident. On examination he had an open wound on the upper back of right arm and showing complete transaction of radial nerve (mixed nerve). Enlist the type of clinical deficits the patient will suffer from?
B) Explain in detail the mechanism of Wallarian degeneration and regeneration?

Q6.A) Draw and label Neuromuscular Junction. Explain the events of transmission of nerve impulse across the Neuromuscular Junction? (3+2)
B) A 35 year old woman came to the neurologist to evaluate her muscle weakness. The doctor gave her a drug that increases the force of muscle contraction. Her blood examination showed presence of some antibodies
i. What is the probable diagnosis?
ii. Explain the pathogenesis of this disease and what is the treatment?

Q7. Enlist all the theories of skeletal muscle contraction. Explain in detail with the help of diagram the molecular mechanism of muscle contraction. (5)

Q8.A) Explain in detail the mechanism of contraction & relaxation in smooth muscles. (3+2)
B) Define the latch mechanism and what is its significance?

Q9.A) Give the differences between the three muscles in the following aspects. (3+2)
i. Excitation contraction coupling
ii. Mechanism of contraction
B) Name any one Neuromuscular junction blocker and also give its mechanism of action.

(1+1+1+1+1)

Q10. Define the following.
i. Chronaxie
ii. Rigor mortis
iii. Tetanization
iv. Curariform Drugs
v. Oxygen debt

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

DULE TEST; Cardiovascular

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50 DATED: 31-07-2019
TIME = 2 hours 10min

Q1. A) Enumerate the properties of cardiac muscle? (2 + 3)
B) Explain in detail mechanism of automaticity & pacemaker potential

Q2. A) Draw ventricular muscle action potential & explain the ionic events in each phase?
B) Draw conduction pathway of cardiac muscle with time scale? (2.5 + 2.5)

Q3. A) Draw & label normal ECG. (3 + 2)
B) Define and explain the causes of circus movement. Enlist all the heart conditions which take place due to circus movement.

Q4. A) Define cardiac cycle. Enlist the mechanical events during one cycle? (2 + 3)
B) Name and explain the mechanism of production of audible heart sounds. With the help of a diagram correlate them with the phases of cardiac cycle

Q5.A) Draw & label left ventricular pressure during cardiac cycle? (2 + 3)
B) Explain the effect of increased pre load & after load on the dynamics of pressure volume loop?

Q6. A) What is the role of kidney in the long term regulation of blood pressure (2.5)
B) Discuss the short term regulation of blood pressure & explain the baroreceptor reflex with the help of diagram? (2.5)

Q7. A) Define Shock? Give the changes which occur in compensated shock? (2.5)
B) A 50 year old woman undergoing a surgery experiences a rapid drop in blood pressure (50/30mmHg) after induction of anesthesia. Her ECG shows normal sinus rhythm. What is the probable diagnosis? (1+ 1+ 0.5)
i. What is the reason for this drop in blood pressure?
ii. What will be the treatment for this condition?

Q8. Define cardiac output and cardiac index? Give in detail the regulation of cardiac output? (5)

Q9. A) Briefly describe the mechanism of regulation of local blood flow? (3)
B) Name the Starling forces regulating the capillary filtration? (2.5)

Q10. Define hypertension & and enlist its types. Explain the mechanism of volume loading type of hypertension with the help of examples? (5)

Name: Zubair Rashid
Roll No: 143

AZRA NAHEED MEDIC
DEPARTMENT OF B

CHEMISTRY OF PROTEINS

CLASS TEST, 1st Year MBBS

Total marks: 70
Time Allowed: 2 hours

Q No. 1.

a. What are amino acids? What are essential and nonessential amino acids. Name essential amino acids. (5)
b. Classify amino acids according to their structure with one example of each. (5)

Q No. 2

a. What are proteins? Classify proteins according to their function with one example from each class. (5)
b. What are plasma proteins? Name major plasma proteins along with their normal values and functions. (5)

Q No. 3

a. Discuss the role/functions of albumin and clinical application in our body. (5)
b. What is edema? What are its causes? (5)
Discuss the process of edema formation and its treatment.

Q No. 4

a. What are acute phase proteins? Discuss the role of three major acute phase proteins. (5)
b. What are clotting factors? (5)
Discuss the role and clinical significance of prothrombin and fibrinogen.

Q No. 5

a. What are immunoglobulins? Draw and explain the general structure of immunoglobulin. (5)
b. Enumerate different classes of immunoglobulins and discuss their individual role. (5)

Q No. 6

a. Name different types of separation techniques used to separate different types of proteins. (5)
Differentiate between electrophoresis & chromatography.
b. What are precipitation methods. Discuss two of them. (5)

Q No. 7

Write Short Notes on
a. Bence Jones proteins (2)
b. Wilson's disease (2)
c. Denaturation and renaturation of proteins (2)
d. Immunoelectrophoresis (2)
e. Tertiary structure of proteins

Total marks: 50
Time Allowed: 2 hours

Q No. 1.

a. Draw Watson and Crick model of DNA and describe its salient features. (5)
b. Mention post-transcriptional changes in mRNA. (5)

Q No. 2

a. Why G is always linked to C and A is always linked to T by hydrogen bonds? Why other options are not possible in structure of DNA? (5)
b. What are the causes of positive and negative nitrogen balance? (5)

Q No. 3

a. Write a note on balanced diet? (5)
b. Compare and contrast Marasmus and Kwashiorkor. (5)

Q No. 4

a. Write down the steps of heme biosynthesis with enzymes and factors. Mention its regulatory step. (5)
b. What are porphyrias? Classify them and mention the deficient enzymes of each type. (5)

Q No. 5

a. Name the bile pigments. How are they formed? (5)
b. Classify jaundice and mention the enzymes raised, clinical findings and features in each type. (5)

Q No. 1.

a. What are the functions of Calcium
b. Hypocalcaemia results in what clinical condition
c. What is the normal level of calcium in blood?

Q No. 2

a. What influences absorption of calcium from intestine?
b. How parathyroid hormone regulates calcium level in blood?
c. Why to treat hyperkalemia early?

Q No. 3

a. What is the important extracellular cation?
b. Which will control the sodium level in serum?
c. What is the normal level of potassium in blood?
d. What are clinical features of hyperkalemia

Q No. 4

a. What are functions of Mn, Mg, and Chromium?
b. Which will increase iron absorption from intestines?
c. Which is the trace element, deficient in milk?

Q No. 5

a. What are the factors which will retard iron absorption?
b. What is the carrier protein in iron in blood?
c. What is hemosiderin and what is the cause for hemosiderosis?

Q No. 6

a. What is ceruloplasmin
b. What is the importance of selenium
c. What are the characteristic features of Wilson's hepatolenticular degeneration?
d. What are the important copper containing enzymes?

Q No. 7

a. What are nucleotides? Enumerate the functions of nucleotides.
b. Make nucleosides and nucleotides of purine and pyrimidine bases

Q No. 8

a. How dietary nucleic acids are hydrolyzed in our body?
b. What are rare and synthetic bases? Give examples of each along with significance.

Q No. 9

a. Draw the structure of tRNA, label it and mention its salient features
b. What are post transcriptional changes in tRNA?

AZRA NAHEED MEDICAL COLLEGE, LA ORE

FOUNATION MODULE ASSESMENT

SEQS Total time: 2 hrs Total marks5

Qno1 Define synovial joint ? classify synovial joints with examples ?(1+4)

Qno2 Briefly describe morphological classification of muscles with examples ?(5)

Qno3 Draw & label histological picture of transitional epithelium ?(5)

Qno4 a) What are different types of connective tissue cells ? (3)

b)Give histological features of fibroblast ? (2)

Qno5 Give classification of connective tissue with examples ?(5)

Qno6 Define fertilization? Give an account of phases of fertilization ?(1+4)

Qno7 Give an account regarding sequence of process of spermatogenesis ?(5)

Qno8 Give differences between spermatogenesis and oogenesis ?(5)

Qno9 what is ovulation ?correlate hormonal control of ovarian cycle ?(2+3)

Qno 10.Differentiate between benign and malignant cells(in tabulated form) and give examples? (5)

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c) Enlist the structures which are pres dical mastectomy? 2

QNO8 Give the origin, course and branches of which can be palpated in the anatomical snuff box. What are dorsal ? 0.25+1.25+2+1.5

QNO9 A young boy fell on the ground and f dial epicondyle of his right humerus; he did not get any treatment and later aw hand deformity

a) Name the nerve which has b this case 0.5

b) Mention the course of this rearm and hand 2

c) Explain the anatomical ba hand deformity 2

d) Mention the sensory are his nerve 0.5

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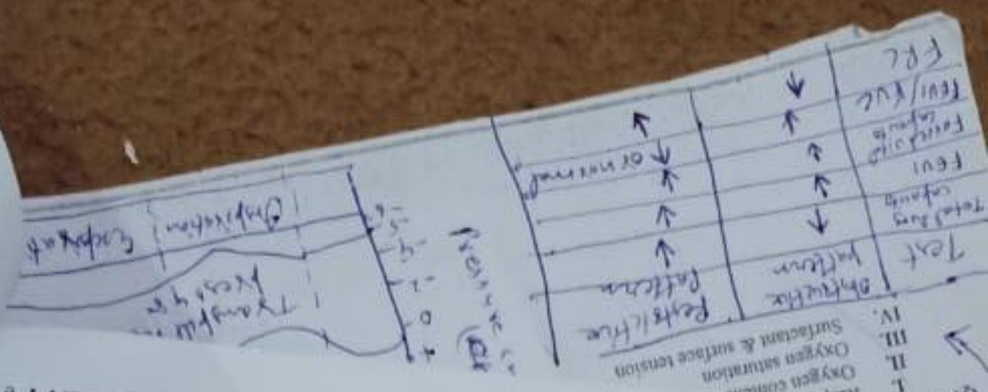

NAHEED MEDICAL .OLLEGE LAHORE

EAR MBBS 2013-14 (Physiology)

REVISION TEST:

BLOOD PHYSIOLOGY - 2

R-I-C.G.I.T. Blood

MULTIPLE CHOICE QUESTIONS (MCQS)

Total Marks: 20

Select Single best answer,

All questions carry equal marks.

Dated: 19-08-2014

INSTRUCTIONS:

1- All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2- Any cutting and overwriting in objective part will not be accepted.

Q1. Following is true regarding blood group antigens

A. Are present in plasma
B. Are called agglutinogen
C. Are enzymes in nature
D. Are formed by plasma cells
E. Are inherited as autosomal dominant

Q2. The best way to prevent Rh auto immunization in a woman who has given birth to Rh positive fetus is to give mother:

A. Blood transfusion
B. Platelet transfusion
C. Rh immunoglobulins (antibodies)
D. Steroids
E. Plasma transfusion

Q3. Regarding specific defense mechanism the following statement is correct:

A. Maturation of B-lymphocytes is determined by erythropoietin.
B. Haptens are strong antigens readily develop immunity.
C. Antigens are (large polysaccharides) initiate acquired immunity
D. Secondary response is always of short duration.
E. All of the above

Q4. Following coagulation factors are vitamin K dependent:

A. Factor X&XI.
B. Factor VII&XI.
C. Factor II, VII, IX & X
D. Factor II, VII&XI.
E. Factor XI & XII.

Q5. Intrinsic and extrinsic mechanism both converge upon

A. Activation of Factor VII
B. Formation of tissue factor
C. Both A and B
D. Activation of Factor Xa
E. Activation of Factor V

Q6. The hypersensitivity to the toxin of poison ivy is a delayed allergic response. Which of the following cells are responsible for this response?

A. B lymphocytes
B. T lymphocytes
C. Basophils
D. Eosinophils
E. Monocytes

Q7. The rupturing of the cell membranes of the bacteria is caused by the lytic complex. Which product of the complement system is the lytic complex?

A. C5b67
B. C5b6789
C. C5b + C5a
D. C3b + C3a
E. C3b

Q8. Newborn with erythroblastosis fetalis with blood group B positive needs transfusion of:

A. B positive blood
B. O negative blood
C. B negative blood
D. AB positive blood
E. A positive blood

Q9. Regarding immunoglobulin all of the following are true Except

A. May activate complement
B. Are gamma globulins
C. Cause precipitation with antigens
D. Cause agglutination with antigens
E. Are formed by monocyte macrophage system

Q10. A 6 year old boy bruises easily and has previously bleeding gums. The maternal grandfather also had a similar disorder. You suspect the deficiency of:

A. Prothrombin activator
B. Factor II
C. Factor VIII
D. Factor X
E. Factor XIII

diagnosed as a case of glycogen storage disease and her liver cells are loaded with excessive glycogen due to defective functioning of:

A. Smooth endoplasmic reticulum
B. Golgi apparatus
C. Lysosomes
D. Mitochondria
E. Peroxisomes

Q12. In the cell membrane, proteins that protrude all the way through the membrane are called:

A. Peripheral proteins
B. Plasma proteins
C. Protruding proteins
D. Integral proteins
None of the above

Q12. A single triplet of 3 nucleotides present on tRNA is known as:

A. Codon
B. Anticodon
C. Code
D. Promoter
E. Genes

Q14. The chromosome consists of DNA and an electropositive protein known as

A. Globulin
B. Immunoglobulin
C. Ferritin
D. Histone
E. Fibrinogen

Q15. Cytoskeleton is important for:

A. Maintenance of cell shape
B. Locomotion
C. Intra cellular trafficking
D. All the above
E. None of the above

Q16. A cancer cell is:

A. Produced as a result of mutation
B. Highly non adhesive

B. Highly undif...
All of the ab...

Q17. Facilitated dif... simple diffusion in that

A. It needs energy
B. It needs a carrier protein
C. It occurs through leak channels
D. It involves breakdown of ATP
E. Its rate increases steadily with increa... amount of substances to be transported outside the cell membrane

Q18. Primary active transport involves the sodium potassium pump.

A. It utilizes energy
B. It works by transporting three sod... out of the cell membrane
C. It functions by transferring two pota... ions inside the cell
D. It is an electrogenic pump
E. All of the above

Q19. The gene expression includes;

A. Transcription only.
B. Posttranslational processing
C. Translation only
D. Peptide linkage only.
E. Transcription, translation and protein synthesis.

Q20. The ATP produced by chemiosm... mechanism is used in all of the following except

A. To supply energy for the transport of sodium through the cell membrane
B. To promote protein synthesis by the ribosomes,
C. To supply the energy needed during muscle contraction.
D. For membrane transport of hydrogen ions in renal tubular cells
E. For absorption of glucose by facilitated diffusion in intestine.

NAHEED MEDICAL
COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane physiology
MULTIPLE CHOICE QUESTIONS (MC
Total Marks: 20
Select Single best answer, all questions
carry equal marks.
Dated: 11/02/20
INSTRUCTIONS
Only objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
Future course and correction in objective part will not be accepted.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cycle and heme formation
C. Has enzymes for oxidative ph
D. Generates ATP
E. All of the above

1. Both the arterial and venous pressures come to equilibrium when all flow in the systemic circulation ceases at a pressure of 7mmHg and this is called?
A. Mean systemic filling pressure
B. Mean arterial pressure
C. Mean venous return
D. Equilibrium pressure
E. Mean blood pressure

2. Which of the following parts of circulation has highest compliance?
A. Capillaries
B. Large arteries
C. Veins
D. Aorta
E. Small arteries

13. If coronary artery diameter is reduced by 50% expected reduction in blood flow would be how many times less?
A. 4 times
B. 12 times
C. 64times
D. 16 times
E. 8 times

14. Which statement is correct regarding effects of hypoxia in pulmonary circulation?
A. It causes vasodilatation
B. It causes vasoconstriction
C. Increases pulmonary blood flow
D. Have no effect on pulmonary blood flow
E. None of the above

15. Loss of vasomotor tone after a history of spinal anesthesia is indicative of:
A. Hypovolemic shock.
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

16. The compensatory mechanisms in non-progressive shock include all of the following except:
A. Arteriolar constriction
B. Increased heart rate
C. Sympathetic over activity
D. Sludging of small blood vessels
E. Increased level of angiotensin 2

17. Generalized cellular deterioration includ the following in irreversible shock except:
A. Failure of Na K pump
B. Depressed mitochondrial activity
C. Increased transcription & translation
D. Decreased glucose uptake
E. Breaking of lysosomal membrane

18. Regarding Starling forces, which of the following tends to decrease capillary filtration rate?
A. Capillary hydrostatic pressure
B. Interstitial hydrostatic pressure
C. Plasma colloidal osmotic pressure
D. Lymphatic pump activity
E. Interstitial colloidal osmotic pressure

19. 35% loss of total blood volume leads to:
A. Compensated shock
B. Progressive shock
C. Irreversible shock
D. No effect on cardiac output & BP
E. None of the above

20. Cardiogenic shock may be due to the following reasons except:
A. Severe heart valve dysfunction
B. Heart arrhythmias
C. Hypoglycemia
D. Septicemia
E. Myocardial infarction

ERA NAHEED DICAL COLLEGE LAHORE

Department of Physiology
1ST YEAR MBBS 2013-14
System Test: HEART PHYSIOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS) Total Marks 20, Time = 20mins
Select Single best answer, all questions carry equal marks.
ROLL #:_____ DATE: 09-04-14

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

1. Which of the following structures has the slowest rate of conduction of the cardiac action potential?
   A. Atrial muscle
   B. Anterior internodal pathway
   C. Atrioventricular bundle fibers
   D. Purkinje fibers
   E. Ventricular muscle

2. Which of the following is true with regard to atrial systole?
   A. Atrioventricular valves remain closed during atrial systole.
   B. Blood is forced through the venae cavae by atrial systole.
   C. Atrial filling can only occur during atrial systole.
   D. Atrial systole is responsible for moving over 25 percent of atrial blood into the ventricles.
   E. About 20 percent of atrial blood goes into the ventricles before atrial systole

3. Which of the following cardiac activity is helped by AV nodal delay?
   A. Ventricular filling
   B. Atrial filling
   C. Ventricular depolarization
   D. Ventricular contraction
   E. Atrial contraction

4. Which of the following phases of the cardiac cycle follows immediately after the beginning of the QRS wave?
   A. Isovolumic relaxation
   B. Ventricular ejection
   C. Atrial systole
   D. Diastasis
   E. Isovolumic contraction

5. Which of the following type of ionic channels are responsible for the spike potential in ventricular muscles of heart?
   A. Fast calcium channels
   B. Sodium leak channels
   C. Voltage gated sodium channels
   D. Slow calcium channels
   E. Voltage gated potassium channels

6. Which of the following events is represented on the ECG?
   A. SA node depolarization
   B. AV node depolarization
   C. His Bundle depolarization
   D. Atrial muscle depolarization
   E. Atrial repolarization

7. Which cardiac event follows P wave?
   A. Atrial contraction
   B. Ventricular contraction
   C. Atrial filling
   D. Ventricular filling
   E. Both A & B

8. Which of the following pairs is INCORRECT concerning the Einthoven triangle?
   A. Lead I: RA/LA
   B. Lead II: RA/LL
   C. Lead III: LA/LL
   D. All of the pairs are correct
   E. None of all

9. Increase in P-R interval is due to:
   A. 1st degree heart block
   B. 2nd degree heart block
   C. Complete heart block
   D. Atrial flutter
   E. Cardiac arrest

10. If the sino atrial node discharges at 0.80 seconds, when will the action potential normally arrive at the epicardial surface at the base of the left ventricle?
    A. 0.22 second
    B. 0.18 second
    C. 0.16 second
    D. 0.12 second
    E. 0.09 second

MEDICAL
LEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology
INSTRUCTIONS
MULTIPLE CHOICE QUES
Total Marks 20
Select Single best answer,
carry equal marks.
Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid
Q2. Most of the control system
body act by:
Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric a
C. Has enzymes for oxidative pho
D. Generates ATP
E. All of the above
Q7. Synthesi

...NAHEED MEDICAL
...COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single ... answer, all questions carry ...

Dated: 11/02/2013

Q1. "Milieu int... envir...

COLLEGE

MULTIPLE CHOICE QUESTIONS (MCQs) Total Marks 20. 20mins
Time =
Select single best answer, all questions carry equal marks.

Roll No

Name

...cycleand

...orylation

...NAHEED
...DICAL COLLEGE
LAHORE
Department of Physiology
1ST YEAR MBBS 2013-14
Stem Test: CIRCULATORY SYSTEM

MULTIPLE CHOICE QUESTIONS (MCQS) Total Marks 20, Time = 20mins
Select Single best answer, all questions carry equal marks.
ROLL #: _____ DATE: 14-05-14

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

1. Which of the following increases the plateau level of cardiac output curve?
   A. Myocarditis
   B. Cardiac tamponade
   C. Myocardial infarction
   D. Mitral stenosis
   E. Decreased parasympathetic stimulation of heart

2. Total peripheral resistance increases in which of the following?
   A. Anemia
   B. Exercise
   C. Sympathetic stimulation
   D. Arteriovenous fistula
   E. None of the above

3. Regarding systemic vascular resistance, choose the best statement?
   A. Is less than the pulmonary vascular resistance
   B. Directly proportional to the blood flow of an organ
   C. Is inversely proportional to the viscosity of blood
   D. Mainly effects the diastolic blood pressure
   E. Is not effected by the sympathetic stimulation

4. Which of the following would be expected to occur during central nervous system ischemic response?
   A. Decreased heart rate
   B. Increased parasympathetic stimulation
   C. Decreased total peripheral resistance
   D. Enhanced sympathetic stimulation and generalized vasoconstriction
   E. Decreased arterial blood pressure

5. In which of the following conditions there will be decreased cardiac output?
   A. Hyperthyroidism
   B. Beriberi
   C. Atrioventricular fistula
   D. Anemia
   E. Acute myocardial infarction

6. Right ventricular failure leads to:
   A. Pulmonary edema
   B. Reduced systemic arterial pressure
   C. Decreased concentration of albumin in the blood
   D. Edema of feet
   E. Edema of face

7. Which of the following does not cause hypo effective heart?
   A. Inhibition of sympathetic nervous excitation of heart
   B. Coronary artery blockage
   C. Valvular heart disease
   D. Cardiac hypoxia
   E. Sympathetic stimulation

8. Which is not true regarding second heart sound?
   A. Duration of second heart sound is about 0.11 second
   B. Vibration produced by sudden closure of semilunar valves
   C. Dub is inaudible for second heart sound
   D. Second heart sound duration is more than first heart sound
   E. Audible with the stethoscope

9. Mean arterial Pressure is?
   A. Systolic blood pressure+ Diastolic blood pressure / 2
   B. It's value is nearer to systolic blood pressure than diastolic blood pressure
   C. 50% of sum of Systolic and Diastolic blood pressure
   D. Systolic blood pressure – Diastolic blood pressure
   E. 1/3 Pulse pressure+ Diastolic blood pressure

10. Which of the following structures are not innervated?
    A. Arterioles
    B. Post capillary venules
    C. Venuoles
    D. Pre-capillary sphincters

Q10. Sterognosis, the sense of feeling an object with closed eyes ascends in?

A. Anterolateral pathway
B. Dorsal column medial leminiscus
C. Lateral spinothalamic tract
D. Ventral spinothalamic tract
E. Anterior spinocerebellar tract

Q11. The primary somatic sensory cortex is located in the?

A. Angular gyrus
B. Cingulated gyrus
C. Precentral gyrus
D. Postcentral gyrus
E. None of the above

Q12. Receptors that detect deep pressure, vibration and proprioception are:

A. Ruffini's end organ
B. Free nerve endings
C. Merkels disc
D. Hair follicles
E. Pacinian corpuscles

Q13. Transmitters in pain control system (analgesia system) include all the following, except:

A. Walking movements,
B. Reflexes that withdraw portions of the body from painful objects,
C. Reflexes that stiffen the legs to support the body against gravity
D. reflexes that control local blood vessels
E. Voluntary muscular movements

Q14. Which of the following systems conveys information concerning highly localized touch sensation and body position (proprioceptive) sensation?

A. Anterolateral system
B. Dorsal column-medial lemniscal system
C. Corticospinal system
D. Spinocerebellar system
E. Vestibulospinal system

Q15. All following small-Molecule, Rapidly Acting Transmitters are inhibitory except:

A. Dopamine
B. Glycine
C. GABA
D. Glutamate
E. Serotonin

Q16. Which part of a neuron is

A. Dendrite
B. Synaptic cleft
C. Axon hillock
D. Axon
E. Nucleus

Q17. Regarding the speed of synapse

A. Acidosis greatly increases it
B. Alkalosis greatly depresses it
C. Hypoxia increases it
D. Across a synapse takes 0.5 mill
E. Caffeine decreases it

Q18. Amorphosynthesis on the opposite body is seen in lesion of?

A. Primary sensory cortex
B. Primary motor cortex
C. Somatosensory association area
D. Area 3, 1, 2
E. Broca's area

Q19. Tabes dorsalis is a disease in wh

A. Antrolatral system is damaged
B. Dorsal nerve root is damaged
C. Dorsal column tracts are degener
D. There is genetic predisposition
E. Both B and C

Q20. Regarding the cold receptors

A. These naked nerve endings
B. These are more numerous than
C. Transmit impulses through Adelta fibers
D. Maximally stimulated at 25 degr
E. All of the above

...RAHEED MEDICAL
...LLEGE LAHORE
...YEAR MBBS 2013-14
(Physiology)

...M TEST: SENSORY SYSTEM

MULTIPLE CHOICE QUESTIONS (MCQS)
Select Single best answer, all questions carry equal marks.

Total Marks: 20 Dated: 16-06-2014

ROLL #:_____

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20mins.
2-Any cutting and overwriting in objective part will not be accepted.

...sensory association area is Brodmann's

...ing the sensory homunculus
...the "relative" amount of sensory ...sent to the brain by various body parts ...body parts are not represented according ...size but according to their sensory

...lips and tongue have greater ...ation.
...reahove

...ificity of a nerve fiber for the different ...determined by (labelled line principle)
...nerve fiber
...meter of nerve fiber
...nerve fiber
...termination of nerve fiber
...e or absence of myelination

...pain is transmitted by
...fibers
...nerve fibers
...fibers
...nerve fibers
...and C

...transmitter agent used by the slow pain ...eased slowly over a period of seconds or ...synapses in the dorsal horn?
...choline
...in gene-related peptide
...ance P
...ate

Q6. Migraine headaches typically begin with a prodromal symptom such as nausea, loss of vision, visual aura, or other sensory hallucinations. Which of the following is thought to be the cause of such prodromes?

A. Increased blood flow to brain tissue in the visual or other sensory cortex
B. Selective loss of GABA neurons in the various sensory areas of cortex
C. Constipation
D. Vasospasm leading to ischemia and disruption of neuronal activity in the relevant sensory areas of cortex
E. Excessive sleep and relative inactivity

Q7. Iggo dome receptors are multiple no: of merkel's disk connected to a single long myelinated fiber, it carries the following sensations:

A. Pain
B. Touch
C. Pressure
D. Temperature
E. Vibration

Q8. Which of the following is an important functional parameter of pain receptors?

A. Exhibit little or no adaptation
B. Are not affected by muscle tension
C. Signal only flexion at joint capsules
D. Can be inhibited voluntarily
E. Give rise to signals that rarely, if ever, convey the location of tissue ischemia

Q9. In which of the following regions of the pain suppression pathway do neurons use serotonin as a neurotransmitter?

A. Postcentral gyrus
B. Nucleus raphemagnus
C. Periaqueductal gray
D. All of the above
E. None of the above

volume is 70 ml and Heart rate is 70/min.

A. 1650 ml/min
B. 4550ml/min
C. 4900ml/min
D. 625 0ml/min

volts
+15 milli volts
-55 milli volts
-90 milli volts
+35 milli volts

Q39. The AV Nodal delay is basically due to:

A. Thick AV node.
B. Insulation between atrial and ventricular syncitia.
C. **Presence of transitional fibers, fewer gap junctions and hyperpolarized cells in the node.**
D. Its sympathetic innervations.
E. The fact that it is not innervated by parasympathetic nervous system.

Q40. Which of the following is a characteristic of progressive hemorrhagic shock?

A. Increased cardiac contractility
B. **Endotoxin release**
C. Decreased capillary permeability
D. Increased cell membrane active transport of sodium
E. Tissue alkalosis

Q41. Loss of vasomotor tone after a history of spinal anesthesia is indicative of:

A. Hypovolemic shock.
B. **Neurogenic shock.**
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

Q42. Coronary blood flow increases during:

A. Systole
B. **Diastole**
C. Repolarization of ventricle
D. Depolarization of ventricle
E. None of the above

Q43. The transpulmonary pressure is:

A. The sum of intrapulmonary pressure
B. Equal to pleural pressure.
C. **The difference of pleural and alveolar pressures.**
D. The difference of intrathoracic and alveolar pressures.
E. The sum of intrapulmonary and alveolar pressures.

during the severe exercise :

A. Shifts to left
B. **Shifts to right**
C. Does not shift
D. Becomes more steep
E. None of the above

increase
D. Diffusing capacity of lungs decreases
E. Mitochondria in cells increase

Q46. Which of the following group of neurons in the respiratory centre emits repetitive bursts of Inspiratory ramp action potentials?

A. Ventral respiratory group
B. Pneumotaxic centre
C. Apneustic centre
D. **Dorsal respiratory group**
E. None of the above

Q47. Which of the following volume / capacity is measured by Helium Dilution Method?

A. Tidal volume
B. Expiratory reserve volume
C. Inspiratory reserve volume
D. **Functional residual capacity**
E. Vital capacity

Q48. FEV1 is characteristically reduced in:

A. Pulmonary edema
B. Respiratory failure
C. Restrictive lung disease
D. **Obstructive lung disease**
E. Pulmonary fibrosis

Q49. The composition of sweat is modified in tubular part of gland under the effect of Aldosterone as:

A. Na & Cl ions are added
B. Na & Cl ions are absorbed
C. K+ ion is added
D. K+ ion is absorbed
E. **Both B and C**

Q50. Body temperature is regulated by a set point in the:

A. Anterior nucleus of hypothalamus
B. Posterior nucleus of hypothalamus
C. Hypothalamus
D. **Preoptic area of hypothalamus**
E. None of the above

PERIOR COLLEGE, LAHORE

1st PROFESSIONAL MBBS

ANNUAL EXAMINATION 2019

BIOCHEMISTRY

(SEQ's)

Shaharyaar Ahmad

Roll No. 117

Time Allowed: 2 hours

Total Marks: 35

28 + 24

Instructions

1. The SEQ's part is to be submitted within 2 hours, Extra time will not be given.
2. Neat Hand Writing use of margin and marker for headlines will increase the presentation of your paper.
3. Do not write your name or disclose your identity in anyway.

Q No. 1.

a. Write down Henderson-Hasselbalch equation and give its uses (2.5)

b. Define pH, pKa and pKI. What is alkalosis and acidosis? Mention normal pH range of blood. (2.5)

(2)

Q No. 2

a. Enumerate heteropolysaccharides. Mention structure, occurrence and importance of hyaluronic acid and chondroitin sulfate. (2.5)

b. What is asymmetric carbon atom. Explain D & L forms of glucose with example. (2.5)

(4)

Q No. 3

a. What are immunoglobulins? Draw and explain the general structure of immunoglobulins.

b. Classify proteins on functional basis with one example from each class. (2.5)

(4)

Q No. 4

a. What are eicosanoids? Mention cyclic and noncyclic eicosanoids. What is the biological importance of prostaglandins and thromboxanes? (2.5)

b. Name ketone bodies? Mention the conditions in which there is ketonemia. Why liver is unable to use ketone bodies for energy purpose although these are synthesized in liver mitochondria? (2.5)

(3)

Q No. 5

a. Describe pellagra, Beri beri, night blindness, scurvy and rickets. (2.5)

b. Mention regulation and functions of calcium and iron. (2.5)

(3)

Q No. 6

a. Mention in order 6 main classes of enzymes and discuss any 2 factors affecting enzyme activity. (2.5)

b. A 30 years old patient presented to medical OPD with depression weakness and abdominal pain. Urine analysis revealed presence of porphobilinogen and gamma amino levulinic acid. The patient was diagnosed with acute intermittent porphyria.

(a) Name the deficient enzyme in this condition. (1)

(b) Is this enzyme cytosolic or mitochondrial? (1)

(c) Will he suffer from photosensitivity or not? (0.5)

(2)

Q No. 7

Name two purine and two pyrimidine bases and make nucleosides and nucleotides with these bases. Mention any three functions of nucleotides. (2.5)

What are post transcriptional modification? Mention these changes in messenger RNA. (2.5)

(4)

Q No. 8

Write short notes on

BMR (1.25)

SDA (1.25)

(2)

AZRA NAHEED MEDICAL COLLEGE LAHORE

1st YEAR MBBS 2015-16

(Physiology)

TOTAL MARKS: 30 Dated: -02-2016

TEST: BLOOD PHYSIOLOGY - 2

INSTRUCTIONS

1-All subjective part is to be submitted **within 40 mins**, no extra time will be given.
2-Neat handwriting, use of margins will increase the outlook /presentation of your paper.

SUBJECTIVE PART (SEQs)

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

Q1. A) Define active immunity. Explain with examples (2)
B) Briefly mention the pathway of cellular immunity with special emphasis on the function of helper T cells? (3)

Q2. A) Give the complications of blood transfusion (both matched and mis-matched)? (4)
B) Give the list of investigation you will do before transfusing a patient? (1)

Q3. A) Fatima 26 yrs old pregnant lady has delivered second male baby in labour room at Jinnah hospital. She is Rh-ve and her husband is Rh +ve. After birth of newborn the pediatric house officer examined the newborn .On examination, the newborn is jaundiced and edematous .On lab investigations, immature nucleated RBC are seen in the blood picture.
a) Diagnose the disease (1)
b) What other signs and symptoms you will note in the newborn baby? (2)
c) What is the treatment given to the newborn? (1)
d) What preventive measure should be taken for the next pregnancy? (1)
B) Give the basis of Rh-blood grouping? (1)

Q4. A) What is pre-processing of B and T lymphocytes in the embryonic life? (2.5)
B) Amir 3 yrs old child was playing in a garden when he got multiple bee-stings on his face and arms. He developed multiple rashes on the skin and swelling of face including eyes. He is feeling suffocation and crying? (2.5)
a) What is your diagnosis?
b) Which type of cells are involved in this reaction?
c) Which type of antibodies are involved in this reaction?

Q5. A) A House physician puts 3 ml of blood in a test tube. Later on he noticed clot formation in the first tube.
a) Name the blood coagulation mechanism by which the clot formation took place. (0.5)
b) Draw the flow diagram for this. (2)
c) How the clot retraction takes place? (1)
B) Give a brief account on monocyte-macrophage system? Which type of immunity is conferred by the reticulo-endothelial system? (1.5)

Q6. A) Define hemostasis? Enlist the steps of hemostasis? (2.5)
B) Write short notes on (2.5)
a) Functions of B-lymphocytes b) Opsonization

15 **Active site of an enzyme is** (a) Where the substrate binds (b) Where the product binds (c) Where both product & substrate bind (d) Where the catalyst binds (e) Is always at one end of the enzymes	16 **Exergonic reactions** (a) Are reversible (b) Release energy (c) Absorb energy (d) Do not go to completion (e) Both (a) & (b) are correct
17 **Affinity of enzyme to substrate is denoted by** (a) Vmax (b) Km (c) Class of enzymes (d) pH (e) Q10	18 **Activity of an enzyme at 50°C** (a) Will increase (b) Will decrease (c) Will not be affected (d) Will depend on pH (e) Temperature has no role in enzymes activity
19 **Competitive inhibition of enzymes is** (a) Irreversible (b) Reversible (c) Is affected by product concentration (d) Increases Vmax (e) Decreases Vmax	20 **Increasing the substrate concentration** (a) Will abolish competitive inhibition (b) Will abolish non-competitive inhibition (c) Will reverse a reaction (d) Will not affect enzyme inhibition (e) None of the above is true
21 **Allosteric enzyme** (a) Has two binding sites for substrate (b) Has two binding sites one for substrate and one for product (c) Has two binding sites one for substrate and one for modifier (d) Has two binding sites one is active and other is inactive (e) Has only one site.	22 **Key enzymes are** (a) Shaped like a key (b) Only act by lock and key mechanism (c) Are rate limiting enzymes in a particular pathway (d) Are competitive enzyme inhibitors (e) Are non-competitive enzyme inhibitors
23 **Ribozymes are** (a) Enzymes present in ribosomes (b) Enzymes which produce ribosomes (c) Enzymes which catalyze ribosomes (d) Enzymes which catalyze RNA (e) RNA molecules with enzyme activity	24 **Isoenzymes are** (a) Physically distinct forms of the same enzyme activity (b) Physically same but with different enzyme activity (c) Are Isomerases (d) Only present in heart (e) Only present in brain
25 **CK-MB is raised in** (a) Acute muscle injury (b) Brain injury (c) Injury to kidneys (d) Myocardial infarction (e) Liver cirrhosis	26 **Which of the following enzymes is used in treatment of acute myocardial infarction** (a) Asparaginase (b) Streptokinase (c) Streptodornase (d) Alpha-1-trypsin (e) Papain
27 **Enzyme used in treatment of acute leukemia is** (a) Asparaginase (b) Streptokinase (c) Streptodornase (d) Alpha-1-trypsin (e) Urokinase	28 **PSA is the marker of** (a) Bone cancer (b) Prostate cancer (c) Breast cancer (d) Liver cancer (e) Acute lymphoblastic leukemia
29 **Gamma glutamyl transferase (GGT) is raised in** (a) Obstructive and alcoholic liver disease (b) Myocardial infarction (c) Cholecystitis (d) Cholelithiasis (e) Malaria	30 **Troponins are accepted as specific markers of** (a) Stroke (b) Cirrhosis of liver (c) Ca breast (d) Myocardial infarction (e) Non Hodgekin's lymphoma

1st Year MBBS 2013

Time: 45 Minutes

Marks: 40

Class Test

Attempt all Questions

1. (a) Define Carbohydrates, Classify carbohydrate and give one example from each class. (1,3)

(b) What are epantiomers? (1)

2. (a) Write a short note on mutarotation. (3)

(b) Draw the howarth structure of glucose. (2)

3. Describe Epimerisim, Anomerism, D & L isomerism and optical isomerism in monosaccharides. (4)

4. (a) What are heteropolysaccharides, give composition occurrence and functions of hyaluronic acid. (1+3)

(b) Why hydrolysis of sucrose is called inversion. (3)

5. (a) Name the reduction products of glucose, galactose, Mannose and fructose. (4)

(b) What are the oxidation products of glucose under various conditions. (3)

6. (a) What is cellulose? Give its biological importance. (2)

(b) Compare and contrast structure and functions of starch and glycogen. (4)

7. (a) A 35 Year old man visited the physian complaining of bloating and diarrhea. He told that he had previous such episodes after ingestion of milk and milk products. (3)

i. What clinical disorder do you suspect?

ii. What is the cause of this disorder

iii. How these episodes can be prevented.

(b) What is Galactosaemia? (3)

ASSESSMENT THIRD MODULE
CLASS TEST, 1st Year MBBS

Total marks: 70
Time Allowed: 2 HOURS

Q No. 1.

a. Define and classify lipids with one example form each class. What is the biological importance of fats? (6)
b. What are polyunsaturated fatty acids (PUFA)? Why these are called essential fatty acids? (6)

Q No. 2

a. What is the difference between cephalin and Plasmalogen? Give biological role of both the lipids. (6)
b. What is respiratory distress syndrome? Give its reason and consequences. (6)

Q No. 3

a. Name ketone bodies, mention site of synthesis. Why liver is unable to utilize ketone bodies for energy purpose? (5)
b. What is rancidity of fat? How it can be prevented? (5)

Q No. 4

a. What are lipoproteins? Classify on the basis of density. Write down the site of synthesis, functions and composition of chylomicrons. (6)
b. What are gangliosides? Give composition and biological importance of gangliosides. (6)

Q No. 5

a. *Name the precursors* of eicosanoids, mentions cyclic and non-cyclic eicosanoids. What is the biological importance of prostaglandins, thromboxanes and leukotrienes. (6)
b. Write down chemical properties of unsaturated fatty acids. (6)

Q No. 6

a. What are steroids? Give biological importance of cholesterol. (6)
b. What are bile acids? Name primary and secondary bile acids with their sites of synthesis. Mention the physiological functions of bile acids. (6)

24-04-2015

Azra Naheed Medical College
Department of Biochemistry
1st Year MBBS

Test on Carbohydrates

Total Marks=50
Time=45 Minutes

Question 1.

(a.) Define & classify carbohydrates with one example from each class. (4)

(b.) Write a short note on mutarotation? (3)

Question 2.

(a.) What are Epimers & Anomers explain with examples? (4)

(b.) Give various oxidation products of glucose under different conditions. (3)

Question 3.

(a.) What are different reduction products of monosaccharides explain with examples? (4)

(b.) Explain D and L isomerism in sugars. (3)

Question 4.

(a.) What are homopolysaccharides, give four examples of homopolysaccharides with their biological importance? (4)

(b.) Compare and contrast structure and functions of starch and glycogen. (3)

Question 5.

(a.) What are heteropolysacchariges, give four examples of heteropolysaccharides with their biological importance? (5)

(b.) What is the biological importance of pentoses? (3

Question 6.

(a.) write a short note on Galactosemia or Lactose intolerance. (4

(b.) Draw Fischer's and Howarth's structure of glucose. (3

Question 7.

(a.) Why hydrolysis of sucrose is known as inversion?

(b.) Write down the sources and biological importance of glucose.

NAHEED MEDICAL
OLLEGE LAHORE
MBBS 2012-17 (Physiology
t: Cell and membrane Ph

MULTIPLE CHOICE QUESTION
Total Marks 20
Select Single be

QS)

ONS (MCQS)

LEGE LAHORE

ST YEAR MBBS 2013-14
(Physiology)

ION TEST: CELL & MEMBRANE PHYSIOLOGY

carry equal marks.

ROLL #: _____

Total Marks: 20 Dated: 12-08-2014

INSTRUCTIONS

1- All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2- Any cutting and overwriting in objective part will not be accepted.

Q1. Total body fluid is 42 liters in normal adult man and is 60 % of the body. The fluid is distributed as:

A. One third intra cellular, one third extra cellular and remaining in blood.
B. One third intra cellular, two third extra cellular.
C. **Two third intra cellular, one third extra cellular**
D. One third intracellular, Remaining in plasma, RBCs and intra cellular.
E. None of the above

Q2. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:

A. Intracellular fluid
B. **Extracellular fluid**
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q3. ECF contains large amounts of:

A. Potasium,magnesium,bicarbonate
B. Iron,zinc,carbon dioxide
C. **Sodium,chloride,bicarbonate**
D. Iodide,chloride,bicarbonate,
E. Sodium,sulphate,phosphate

Q4. Most of the control systems of the body act by:

A. Feed forward mechanism
B. Adaptive feedback mechanism
C. Positive feedback mechanism
D. Neutral feedback mechanism
E. **Negative feedback mechanism**

Q5. The lipid bilayer contains phospholipid molecules that have following charaberistics:

A. One end is hydrophilic
B. One end is hydrophobic
C. Hydrophilic end aligns towards water while hydrophobic ends has natural attraction for each other
D. **All the above**
E. None of the above

Q6. Formation of a clot when a blood vessel is injured is an example of:

A. Negative feedback mechanism
B. Feed forward mechanism
C. Adaptive feedback mechanism
D. **Positive feedback mechanism**
E. All of the above

Q7. Gain of a control system is:

A. Correction multiplied by error
B. **Correction divided by error**
C. Error/correction
D. Is less if correction is more
E. Is more if error is more

Q8. In the cell membrane, proteins that protrude all the way through the membrane are called:

A. Peripheral proteins
B. Plasma proteins
C. Protruding proteins
D. **Integral proteins**
E. None of the above

Q9. Entire outside surface of the cell has a loose carbohydrate coat called:

A. Cell membrane
B. Cell wall
C. **Glycocalyx**
D. Glycoproteins
E. Peripheral space

Q10. Lysosomes are formed:

A. By cell replication
B. **By budding off the golgi apparatus**
C. By cell membrane
D. Are already present in the cell
E. Through the division of already existing lysosomes

AGHA KHAN UNIVERSITY MEDICAL COLLEGE
DEPARTMENT OF BIOCHEMISTRY

Name: _____

Roll No.: _____

Marks obtained: _____

CLASS TEST ON ENZYMES - 2017
FIRST YEAR MBBS PART I – MCQs

Total marks: 30
Time Allowed: 20 minutes

Select one best answer

1 **Enzymes**
(a) Are used up in the reaction
(b) Inhibit a reaction
(c) Increase the energy of activation
(d) Are biological catalysts
(e) Make ATP

2 **Enzymes are mostly**
(a) Protein in nature
(b) Lipids
(c) Carbohydrates
(d) Metal ions
(e) None of the above

3 **Enzymes lower the activation energy**
(a) By altering the thermodynamics of reaction
(b) Without altering the thermodynamics of reaction
(c) By absorbing the energy
(d) By release of energy
(e) Both (c) & (d) are correct

4 **The substance upon which an enzyme acts, is called**
(a) Catalyst
(b) Protein
(c) Product
(d) Substrate
(e) Coenzyme

5 **Enzymes are**
(a) Heat stable
(b) Heat labile — thermolabile
(c) Are not affected by heat
(d) Only work above 40°C
(e) None of the above is true

6 **Enzymes are**
(a) Strictly protein in nature
(b) May also contain a non-protein part
(c) Are also called ribozymes
(d) Are called apoenzymes
(e) All of the above are correct

7 **Apoenzyme is**
(a) The enzyme as a whole
(b) Is ribozyme
(c) The protein part of the enzyme
(d) The non-protein part of enzyme
(e) Is a prosthetic group

8 **Holoenzyme is**
(a) Apoenzyme + prosthetic group
(b) Apoenzyme + protein part of enzyme
(c) Coenzyme + prosthetic group
(d) Coenzyme + metal ion
(e) Enzyme with RNA molecules

9 **Enzymes having more than one polypeptide chain are called as**
(a) Monomeric enzymes
(b) Multi-enzyme complex
(c) Oligomeric enzymes
(d) Coenzymes
(e) Ribozymes

10 **When active form of enzyme acts on zymogen catalyzing its conversion into active form, the process is called**
(a) Biological catalysis
(b) Proenzyme
(c) Autocatalysis
(d) Enzyme inhibition
(e) Denaturation of enzyme

11 **Enzymes are grouped into**
(a) 3 major classes
(b) 4 major classes — OTHER
(c) 5 major classes
(d) 6 major classes
(e) 2 major groups

12 **Coenzymes are**
(a) Also called Holoenzyme
(b) Are heat labile
(c) Are heat stable
(d) Are proteins in nature
(e) None of the above

13 **Hydrolases**
(a) Break the bond by adding water
(b) Break the bond by removing water
(c) Make a bond by adding water
(d) Make a bond by removing water
(e) Only act on milk

14 **Lyases act by**
(a) Joining two substrate by a covalent bond
(b) Breaking a bond by adding water
(c) Breaking a bond by removing water
(d) Break bonds by mechanism other than hydrolysis
(e) Must have metal ion in it

4

.at kind of bleeding disorders are produced in platelet deficiency and defects and how ,ou diagnose?

, hrombocytopenia- Low levels of Platelets due to various causes.

Bone marrow causes: Aplastic anemia, Viral infection like Dengue fever, Epstein barr virus infection etc, myelodysplasias

Platelet destruction causes: Idiopathic thrombocytopenic purpura (ITP), Thrombotic thrombocytopenic purpura (TTP), Splenomegaly, hemolytic uremic syndrome and Disseminated Intravascular coagulation.

Thrombasthenia- Glanzmann's hemorrhagic thrombasthenia

Q7. What are the other disorders and conditions that prolong bleeding time?

Thrombocytopenia secondary to :

1. *Bone marrow aplasia*
2. *Dengue fever*
3. *Immunosppressive drugs/radiation*
4. Cancer chemotherapy
5. bone marrow malignancies

Thrombasthenia

Q8. Give all the treatment options for the above mentioned condition.

The condition is treated by transfusion of:

Fresh plasma,

Fresh frozen plasma,

Factor VIII concentrates,

Transfusion of fresh whole blood.

Morning Sickness

XYZ 20 year female complained right lower abdominal pain for last 3 days. She felt lethargic and noticed some vaginal bleeding this morning which exagerrated her concern. She always thinks and wanted a family.

She had regular visits to her doctor after her marriage to talk about her pregnancy plans and monitored her periods closely. When her period was missed, she immediately took a pregnancy test and subsequently called her doctor for appointment. Pregnancy test was positive. On physical examination XYZ feels right lower abdominal pain but no tenderness. She also feels nausea, vomiting and morning sickness, when she gets up in the morning. Ultrasound was performed and confirmed the status of ectopic pregnancy.

Objectives

- Define Ectopic pregnancy
- To know the most common site of ectopic pregnancy
- To know the information and support for women when experiencing pain and/or bleeding in early pregnancy
- To think about the pregnancy with non-specific symptoms, in the context of ectopic pregnancy risk
- To use the expectant management of miscarriage
- To know about the general information and support when women experiencing a miscarriage

PBL Questions Key

Q1. Define hemostasis. Enlist its steps and outline their details.

The term hemostasis means prevention of blood loss. Whenever a vessel is severed or ruptured, hemostasis is achieved by several mechanisms:

(1) Vascular constriction,

(2) Formation of a platelet plug,

(3) Formation of a blood clot as a result of blood coagulation, and

(4) Eventual growth of fibrous tissue into the blood clot to close the hole in the vessel permanently.

Q2. Give the differential diagnosis for the above mentioned scenario?

D/D:

1. Hemophilias: Hemophilia A, B and C. Hemophilia A is due to abnormal or deficient Factor VIII. It is an X linked disorder hence affects only males. It's a serious bleeding disorder which predisposes the person to excessive bleeding from minor injuries.

Hemophilia B & C are due to deficiency of Factor IX and XI respectively. They are milder forms of Hemophilia.

2. Non -thrombocytopenic purpura- Sometimes there is an abnormality in the blood vessels which predisposes the person to easy bruisibility. In the above scenario following non-thrombocytopenic purpura can be the case.

a) Glanzmann's hereditary hemorrhagic thrombasthenia- The platelets show absence or dysfunction of glycoprotein IIb/IIIa and do not show aggregation because they are deficient in adhesiveness.

b) Bernard Soulier syndrome: In this disorder, platelets show defective adhesiveness due to deficiency of glycoprotein Ib/IX.

c) Von Willebrand's disease: This is caused by the lack of a plasma protein namely Von Willebrand's factor which is necessary for adhesion of platelets and also serves to carry factor VIII in plasma.

d) Isolated Factor II, V, VII, X, or XII deficiencies.

MEDICAL
GE LAHORE
MBBS 2012-17 (Physiology
test; Cell and membrane ph

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COLLEGE LA
MBBS 2013-14 (
SYSTEM
BLO

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best an

Cell and membrane physiology
(MCQS)
MULTIPLE CHOICE QUESTIONS (MCQS)

Q1. Which of the following statement regardi
fluid compartment is true?
A. 40% of the total body fluid is wa
B. One-third of the flu d is intra
the fluid is extracellular
C. One-third of the fluid
the fluid is intrace
D. Two-third of "
the fluid i
E.

Blood

1. A patient suffers from a congenital deficiency factor XIII (fibrin-stabilizing factor). What would alysis of his blood reveal?

A. Prolonged prothrombin time
B. Prolonged whole blood clotting time
C. Prolonged partial thromboplastin time
D. Easily breakable clot
E. None of the above

12. What is the term out of following for adhesion an invading bacteria with IgG and complement to facilitate recognition by a macrophage?

A. Chemokinesis
B. Opsonization
C. Phagolysosome fusion
D. Signal transduction
E. None of the above

Q13. Interleukin-2 (IL-2) is an important molecule in the immune response. What is its function?

A. It binds to and presents antigen
B. It stimulates proliferation of cytotoxic T cells
C. It kills virus-infected cells
D. It is required for proliferation of helper T cells
E. None of the above

Q14. Which of the following would most likely be used for prevention of sudden ischemic heart attack?

A. Heparin
B. Warfarin
C. Aspirin
D. Streptokinase
E. None of the above

Q15. Which of the following is appropriate treatment for massive pulmonary embolism?

A. Calcium
B. Vitamin K
C. Aspirin
D. Tissue plasminogen activator
E. None of the above

Q16. A 10-year-old boy with a prolonged [illegible] time (25 seconds; control, 11 to 15 seconds) is [illegible] to a hematologist before undergoing surgery. [illegible] patient's bleeding time is normal. Which coagula[illegible] system is abnormal in this case?

A. Platelet production
B. Platelet function
C. Extrinsic pathway
D. Generation of clotting factors by the liver
E. None of the above

Q17. During vaccination we give repeated doses of attenuated antigens which are antigenic but not disease producing. This is an example of:

A. Innate immunity
B. Passive immunity
C. Acquired active immunity
D. Readymade immunity
E. None of the above

Q18. Which of the following is a true statement?

A. In a transfusion reaction, there is agglutination of the recipient blood
B. Shutdown of the kidneys following a transfusion reaction occurs slowly
C. Transfusion of Rh-positive blood into any Rh-negative recipient for the first time will result in an immediate transfusion reaction
D. A person with type AB blood is considered to be a universal recipient
E. None of the above

Q19. During cross matching of blood the compatibility is seen by reacting:

A. Donors RBCs with recipients serum
B. Recipient RBCs with donors serum
C. Donors serum with recipient serum
D. Donors RBCs with recipient RBCs
E. All of the above

Q20. Amjad got bilateral kidney failure due to diabetes. He was operated for a kidney transplant. The kidney was donated by his identical twin brother. This is known as:

A. [illegible]
B. [illegible]
C. [illegible]
D. [illegible]

UNIT TEST: Circulation
Date: 11-07-18

Name: _____

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator **within 20 mins**
2-Any cutting and overwriting in objective part will not be accepted.

1- **Which of the following component of circulatory system offers greatest resistance to blood flow?**
- A. Capillaries
- B. Arteries
- C. Arterioles
- D. Veins
- E. Venules

2- **Eddy current is the property of**
- A. Streamline flow
- B. Laminar flow
- C. Fluid with greater viscosity
- D. Turbulent flow
- E. It is not the property of fluids

3- **The local blood flow of which of the following system is entirely regulated by the nervous system?**
- A. Blood flow to the cerebral area
- B. Coronary circulation
- C. Skelatal muscle circulation
- D. Pulmonary circulation
- E. Cutaneous circulation

4- **A 70 Kg man has a heart rate of 70beats/min. His End diastolic volume is 120ml & End systolic volume is 50mL What will be his cardiac output?**
- A. 5000ml
- B. 4900ml
- C. 4000ml
- D. 5200ml
- E. Cardiac output cannot be calculated

5- **Venous return to the heart depends on all of the factors except**
- A. Right Atrial pressure
- B. Mean systemic filling pressure
- C. Cardiac output
- D. Left Atrial pressure
- E. Resistance to blood flow

6- **An acute decrease in the arterial blood pressure elicits which of the following compensatory changes?**
- A. firing rate of the carotid sinus nerve is altered
- B. Increased parasympathetic outflow of the heart
- C. Decreased heart rate
- D. Decreased contractility
- E. Decreased mean systemic filling pressure

7- **A 75 year old woman came to her family physician with complain of shortness of breath on exertion and an episode of syncope (loss of consciousness) while doing her household chores. A systolic ejection murmur is auscultated that radiates to the carotid arteries. What is the probable diagnosis?**
- A. Aortic regurgitation
- B. Pulmonic regurgitation
- C. Mitral stenosis
- D. Aortic stenosis
- E. Tricuspid stenosis

8- **Loss of vasomotor tone after a history of spinal anesthesia is indicative of:**
- A. Hypovolemic shock.
- B. Neurogenic shock.
- C. Septic shock.
- D. Anaphylactic shock.
- E. Cardiogenic shock

9- **A 37 year old female was brought to the emergency department in shock. Which of the following is the reason to direct treatment toward septic shock rather than hypovolemic shock?**
- A. Cardiac output is higher than normal
- B. Ventricular contractility is greater than normal
- C. Total peripheral resistance is greater than normal
- D. Heart rate is greater than normal
- E. Both of them have the same line of treatment

17- Regarding sarcomere, which of the following statement is correct?

A. In a contracted state length of the sarcomere increases
B. It is the portion of myofibril between two successive Z- discs.
C. It is the portion of muscle fiber between two I- bands
D. It is a part of sarcoplasmic reticulum and is involved in muscle contraction.
E. Sarcomeres are only present in the skeletal muscle

14- Which of the following is the cause of rigor mortis in skeletal muscles?

A. An increase in the intracellular Ca^{++} levels

B. A decrease in the intracellular Ca^{++} levels

C. An increase in the ATP levels

D. A decrease in the ATP levels

E. None of the above

- A 50 year old man presents with weight loss, cough & diffuse chest pain. A chest X-ray reveals normal heart & lungs, but the radiologist detects a "bird's beak" narrowing of the terminal esophagus, which is also seen with a barium swallow. Follow up history indicates that the patient also has dysphagia & regurgitation. Manometry shows increased lower esophageal sphincter pressure with no relaxation upon swallowing. What is the probable diagnosis?

A. Gastroesophageal reflux disease (GERD)
B. Dysphagia
C. Achalasia
D. Peptic ulcer
E. Loss of peristalsis

C

Q11. Which of the following is the basis for referred pain?

A. Visceral pain signals and pain signals from the skin synapse with separate populations of neurons in the dorsal horn
B. Visceral pain transmission and pain transmission from the skin are received by a common set of neurons in the thalamus
C. Visceral pain signals are rarely of sufficient magnitude to exceed the threshold of activation of dorsal horn neurons
D. **Some visceral pain signals and pain signals from the skin provide convergent input to a common set of neurons in the dorsal horn**
E. A population of neurons in the somatosensory cortex is responsible for integrating visceral pain signals and pain signals from the skin

Q12. Integrative function of nervous system involves ignoring most of sensory information except:

A. Contact of clothing
B. Pressure of seat on which person is sitting
C. Noise of our surroundings
D. An occasional object in field of vision
E. **Person places a hand on a hot stove**

Q13. Which part of a neuron is most excitable?

A. Dendrite
B. Synaptic cleft
C. **Axon hillock**
D. Axon
E. Nucleus

Q14. Which cell provides myelin in CNS axons?

A. Astrocytes
B. Schwann cell
C. **Oligodendrogliocyte**
D. Microglia
E. fibroblast

Q15. All following small-Molecule, Rapidly Acting Transmitters are inhibitory except:

A. Dopamine
B. Glycine
C. GABA
D. **Glutamate**
E. Serotonin

Q16. Neurons communicate with each other electrical synapse which are also known as:

A. **Gap junctions**
B. Chemical synapse
C. Neurotransmitters
D. Tight junctions
E. Synaptic cleft

Q17. Regarding the speed of synaptic transmission:

A. Acidosis greatly increases it
B. Alkalosis greatly depresses it
C. Hypoxia increases it
D. **Across a synapse takes 0.5 millisecond**
E. Caffeine decreases it

Q18. Amorphosynthesis on the opposite side of body is seen in lesion of?

A. Primary sensory cortex
B. Primary motor cortex
C. **Somatosensory association area**
D. Area 3, 1, 2
E. Broca's area

Q19. All of the following may give rise to visceral pain except:

A. Ischemia
B. Distension of a hollow viscous
C. Spasm of a smooth muscle in a hollow viscus
D. **Incision with a sharp blade**
E. All of the above

Q20. The inflammation of the appendix typically starts in the wall of the appendix close to the lumen and extends centrifugally involving eventually the parietal peritoneum that covers the cranial wall. The initial pain of an appendicitis originating from the appendix itself is likely to be felt at the:

A. Right upper quadrant
B. Left lower quadrant
C. Right lower quadrant
D. **Umbilical region**
E. Right posterior lumbar region

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

Roll # 52

MODULE TEST: RESPIRATION

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50
TIME = 2 Hrs

DATED: 04-09-2019

Increase ?

Q1. A) Explain the mechanism of inspiration & expiration with special emphasis on changes in respiratory pressure & muscles involved? volume change Diameters change (5)

Q2. A) Draw O2-Hb dissociation curve. (2+2+1)
B) A 25 year old athlete participates in a marathon. Explain in detail the effect of exercise on O2-Hb dissociation curve?
C) Define P_{50} & explain the effect of exercise on P_{50}?

Q3. A) Define compliance of the lungs. Draw compliance hysteresis loop diagram. (2+1.5+1.5)
B) An X-ray of a 50 year old man with history of smoking showed bullae formation in the lung. What will happen to the lung compliance of this person?
C) What investigations you will suggest to assess the lung functions in this patient?

Q4. A) A 50 year old man had a surgery of his fractured femur. He experienced pulmonary embolism which completely blocked blood flow to his right lung. What will be the effect on ventilation & perfusion of the affected lung? (2.5+2.5)
B) Define dead space? What is it's normal value? Describe in detail its different types?

Q5. A) List the different means of transport of CO2 in blood? (3+2)
B) Define Bohr's effect & Heldane effect?

Q6. Draw a normal spirogram. Name all the volumes and capacities measured by direct spirometry? (5)

Q7. A) Enlist all the lung function tests. (2.5+2.5)
B) Differentiate between obstructive and restrictive lung diseases on the basis of different lung function tests.

Q8. A) Define and classify hypoxia with the help of examples. (2.5 + 2.5)
B) Describe the process of acclimatization of people living in high altitudes.

Q9. A) Name all the nervous control centers of respiration and outline their functions . (3 +2)
B) What is CAISSON'S DISEASE? Explain its pathophysiology.

Q10. Define the following (1+1+1+2)

I. Respiratory membrane
II. Oxygen content ?
III. Oxygen saturation
IV. Surfactant & surface tension

6- Regarding RMP a potential which is generated because of the ionic concentration difference across the membrane is called?

A. Equilibrium potential

B. Nernst potential

C. Diffusion potential

D. Action potential

E. None of the above

7- Which of the following is the fastest conducting nerve fiber?

A. Type C fiber

B. A alpha fiber

C. A beta fiber

D. A gamma fiber

E. Type B fiber

B

...MEDICAL
...EGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology
Dated: 11/02/2

INSTRUCTIONS
MULTIPLE CHOICE QUESTIONS (MC
Total Marks: 20
Select Single best answer, all question
carry equal marks.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the control ... body act...

Q3. Which of the following parts of circulation ... highest compliance?
A. Capillaries
B. Large arteries
C. Veins
D. Aorta
E. Small arteries

Q12. Loss of BLOOD after a history of ACCIDENT is indicative of:
A. Hypovolemic shock.
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

Q13. Angiotensin 2 restores the BP by?
A. Arteriolar vasoconstriction
B. Increasing ADH level
C. Increasing thirst
D. Increasing aldosterone level
E. All of the above

Q14. Which is not true regarding second heart sound?
A. Duration of second heart sound is about 0.11 second
B. Vibration produced by sudden closure of semilunar valves
C. Dub is indicative for second heart sound
D. Second heart sound duration is more than first heart sound
E. Audible with the stethoscope

Q15. Which of the following vessel offer greatest resistance to blood flow?
A. Arteries
B. Arterioles
C. Capillaries
D. Venules
E. Veins

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cycle and ... heme formation
C. Has enzymes for oxidative ...
D. Generates ATP
E. All of the abo...

Q7. S...

Q16. The vasomotor center:
A. Is located in the upper portion of the pons
B. Decreases its sympathetic activity to the blood vessels when blood pressure falls
C. May not be blocked by spinal anesthesia
D. Does not induce vaso-constriction or vaso-dilatation
E. Concerned with caliber of blood vessels & rate of heart beat

Q17. Loss of vasomotor tone after a history of spinal anesthesia is indicative of:
A. Hypovolemic shock.
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

Q18. Venous return to the heart is increased by:
A. Decreased blood volume
B. Decreased sympathetic tone
C. Increase in contraction of skeletal muscles
D. Increase in negativity of the thoracic pressure from -4 to-8 mm Hg
E. Increase in pressure in right atrium

Q19. Which of the following conditions often occur in compensated hemorrhagic shock?
A. Decreased heart rate
B. Stress relaxation
C. Decreased ADH (hormone) release
D. Decreased absorption of interstitial fluid through capillaries.
E. CNS ischemic response

Q20. The percentage of the end diastolic volume which is ejected out in one systole or one stroke is 65%. This is called:
A. Stroke volume
B. Cardiac output
C. Ejection fraction.
D. End diastolic volume
E. End systolic volume

Date: 25-04-2014

Azra Naheed Medical College, Lahore

1st Year MBBS

Time: 45 Minutes

Marks: 40

Class Test on Enzymes

Attempt all Questions

Question: 1

(a) Tabulate sequence wise the six main classes of enzymes with two examples from each class. (3)

(b) What are competitive, non competitive enzyme inhibitions? Sketch the Michaelis Menten and Lineweayer –Burke (double reciprocal) plots in the presence and absence of competitive inhibitor, clearly indicating how you could determine Km and Vmax. (4)

Question: 2

(a) What are enzymes, coenzymes and cofactors name the vitamins present in the following coenzymes, NAD, FAD, TPP and coenzyme A respectively? (4)

(b) Explain with examples covalent modification of enzymes activity. (3)

Question: 3

What is the importance of serum enzymes in diagnosis of various diseases? Explain your answer with examples. (6)

Question: 4

(a) What are isoenzymes, give isomeric forms of LDH and CK? (3)

(b) What are zymogens (proenzyme) explain your answer with three examples. (3)

Question: 5

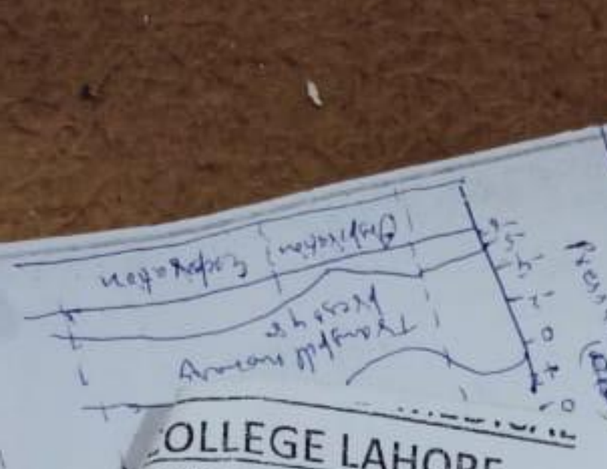
What is the affect of substrate concentration, pH, temperature and enzyme concentration on enzyme catalyzed reactions? (5)

Question: 6

Write short notes on following

(a) Enzymes as medicine (4 ½)

(b) Allosteric regulation of enzyme activity (4 ½)



COLLEGE LAHORE

MBBS 2013-14 (Physiology)

SYSTEM TEST:

BLOOD PHYSIOLOGY - 1

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer,
All questions carry equal marks.

Dated: 13-01-2014

INSTRUCTIONS:

1- All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2- Any cutting and overwriting in objective part will not be accepted.

Q1. Inflammation is acute response of the tissue to injury. Which of the following plasma proteins is responsible for "walling off" effect of inflammation?

A. Prothrombin
B. Albumin
C. Fibrinogen
D. γ Globulin
E. α Globulin

Q2. Serum differs from plasma in lacking:

A. Albumin
B. Fibrinogen
C. Globulin
D. Ferritin
E. Apoferritin

Q3. Which are the most abundant of all the cells of the blood?

A. Lymphocytes
B. Neutrophils
C. Monocytes
D. Platelets
E. Red blood cells

Q4. The following cell is devoid of the hemoglobin:

A. Erythrocyte
B. Reticulocyte
C. Intermediate normoblast
D. Late normoblast
E. Pronormoblast

Q5. Maturation of erythroblasts involves:

A. Increase in size of cell
B. Condensation of chromosomes in nucleus
C. Accumulation of hemoglobin
D. Pyknosis of nucleus
E. Breakage of cell membrane

Q6. The oxygen and carbon dioxide exchange in RBC maximum with the following configuration of red cell

A. Spherical
B. Oval
C. Triangular
D. Rectangular
E. Biconcave

Q7. In an adult human the red cells are formed continuously in the bone marrow of the:

A. Sesamoid bones
B. Shafts of long bones
C. Lower ends of the long bones
D. Membranous bones
E. Phalangeal bones

Q8. Fe in the liver parenchymal cells is stored in the form of:

A. Apoferritin
B. Transferrin
C. Hemosiderine
D. Ferritin
E. Hemochromatin

Q9. The protein responsible for iron transport in plasma is:

A. α 1-anti trypsin
B. Ferritin
C. Apo-transferrin
D. Apo-ferritin
E. Ceruloplasmin

Q10. The erythropoietin level in the blood of the following will be high:

A. Olympic marathon runner
B. End stage renal disease
C. Polycythemia vera
D. Aplastic anemia
E. Leukemia

AHEED MEDICAL
COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer, all questions carry equal marks.

INSTRUCTIONS
Dated: 11/02/2013

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the control systems of the body act by:
A. Feed forward mechanism
B. Adaptive feedback mechanism

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cycle and heme formation
C. Has enzymes for oxidative phosphorylation
D. Generates ATP
E. All of the above

Q7. Synthesis of carbohydrates like chondroitin sulphate and hyaluronic acid is the function of
A. RER
B. SER

ZRA NAHEED MEDICAL COLLEGE LAHORE

Department of Physiology
1st YEAR MBBS 2012-17
Revision Test: Circulation

MULTIPLE CHOICE QUESTIONS (MCQS)
Marks 20, Time =20mins
Select Single best answer, all questions carry e marks.
DATED: 25-0

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to invigilator within 20 minutes..
2-Any cutting and overwriting in objective part will not be accepted.

Q1. Mean arterial Pressure is?
A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic blood pressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

Q2. In which of the following conditions there will be a decreased cardiac output?
A. Hyperthyroidism
B. Beriberi
C. Atrioventricular fistula
D. Anemia
E. Acute myocardial infarction

Q3. Right ventricular failure leads to
A. Pulmonary edema
B. Reduced systemic arterial pressure
C. Decreased concentration of aldosterone in the blood
D. Edema of feet
E. Edema of face

Q4. Stimulation of baroreceptors leads to
A. Increase in blood pressure
B. Increase in heart rate
C. Decrease in blood pressure and decrease in heart rate
D. Increase in blood pressure and decrease in heart rate
E. Increase in blood pressure and increase in heart rate

Q5. Vessels which are not under sympathetic tone are
A. Arterioles
B. Capillaries + Precapillary sphincters
C. Veins
D. Small arteries
E. Large arteries

Q6. following conditions may result from the lo standing Hypertension except:
A. Renal failure
B. Cerebral haemorrhage
C. Retinal haemorrhage
D. Myocardial infarction
E. Hepatitis

Q7. Which of the following sets of differences b describes the hemodynamics of the pulmonar circulation when compared with systen circulation?

	(Flow)	(Resistance)	(Arterial Pressure
A.	Higher	Higher	Higher
B.	Higher	Lower	Lower
C.	Lower	Higher	Lower
D.	Lower	Lower	Lower
E.	Same	Lower	Lower

Q8. Both the arterial and venous pressures come equilibrium when all flow in the systemic circulati ceases at a pressure of 7mmHg and this is called?
A. Mean systemic filling pressure
B. Mean arterial pressure
C. Mean venous return
D. Equilibrium pressure
E. Mean blood pressure

Q9. Immediately after an acute coronary occlusi blood flow ceases in the coronary vessels beyond t occlusion except for small amounts of collateral fl from surrounding vessels and results in ischen necrosis of heart muscles. This phenomenon called:
A. Angina pectoris
B. Atrial fibrillation
C. Cardiac tamponade
D. Myocardial infarction
E. Pericarditis

Q10. Coronary blood flow increases during:
A. Systole
B. Diastole
C. Repolarization of ventricle
D. Depolarization of ventricle
E. None of the above

28-05-2014

DEPARTMENT OF BIOCHEMISTRY

1ST YEAR MBBS 2014

TEST ON PROTEINS & LIPIDS

TIME: 45 MINUTES
MARKS: 40

QUESTION NO. 1

(a) Define and classify lipids with one example from each class. (3)
(b) Name essential fatty acids; also mention number of carbon atoms and position of double bonds. (3)

QUESTION NO. 2

(a) What are lipoproteins? Give composition and site of synthesis of chylomicrons (3)
(b) What are primary and secondary bile acids? Mention their sites of synthesis and biological functions (4)

QUESTION NO. 3

(a) What are eicosanoids? Name cyclic and non cyclic eicosanoids, enumerate physiological functions of prostaglandins. (3)
(b) What are ceramides? Differentiate between cerebrosides and gangliosides. Mention their physiological functions (4)

QUESTION NO. 4

(a) Write a short note on secondary structure of protrins. (4)
(b) What are essential, non standard and modified amino acids explain with examples (3)

QUESTION NO. 5

(a) Classify proteins on functional basis with one example from each class (3)
(b) Compare and contrast myoglobin and hemoglobin. (4)

QUESTION NO. 6

(a) What are free radicals, how these are generated in the body? Mention their physiological role (3)
(b) Draw the structure of steroid nucleus, mention the physiological importance of cholesterol. (3)

AHEED MEDICAL
LEGE LAHORE
2012-17 (Physiology)

AZRA

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single b

Q10. Multiunit smooth muscle fibers are:

A. Supplied by many muscle fibers by a single nerve fiber
B. **One muscle fiber supplied independently by one nerve fiber** ✓
C. Contract in response to hormonal stimulation
D. Do not obey the nervous stimulation
E. Are slowly contracting muscles

Q11. Plateau potential is not seen in:

A. Atrial fibers of the heart
B. Smooth muscle fibers of gut
C. Cardiac muscle fibers
D. **Skeletal muscle fibers** ✓
E. Ventricular heart muscle

Q12. Axoplasm contains all the organelles of the neuroplasm except?

A. Mitochondria
B. **Endoplasmic reticulum, Nissl grannuels and Golgi apparatus** ✓
C. Endoplasmic reticulum
D. Neurofilaments
E. Secretory vesicles

Q13. The repeated stimulation of skeletal muscle at a higher rate results in summation of successive contractions known as:

A. Tetany
B. Tetanus
C. **Tetanization** ✓
D. Spatial summation
E. Convulsion

Q14. Which of the following is true regarding the release of neurotransmitter from synaptic vesicles?

A. Both calcium ad sodium influx
B. **Calcium influx** ✓
C. Sodium influx
D. Potassium influx
E. Potassium efflux

Q15. End Plate Potential is described as

A. A local potential ✓
B. Obeys all or none laws
C. Has a refractory period
D. Is self propagated
E. Has absolute refractory period

Q16. Which phase of the action potential is caused by opening of activation gates of Na^+ channels in the nerve axon?

A. **Upstroke** ✓
B. Downstroke
C. After depolarization
D. After Hyperpolarizationl
E. Hyperpolarization

Q17. The absolute refractory period of a nerve fiber:

A. Lasts through out an action potential
B. Is when the fiber is relatively more excitable than the relative refractory period
C. **Occurs before the relative refractory period** ✓
D. Is due to low calcium concentration
E. Is when a stronger than normal stimulus is required to excite the fiber

Q18. While the skeletal muscle is shortening during isotonic contraction:

A. The muscle lifts a weight.
B. The length of the muscle decreases.
C. One end of the muscle is not fixed.
D. The tension developed in the muscle is minimal.
E. **All of the above** ✓

Q19. The fastest conducting nerve fibers are:

A. A delta type
B. Fibers for pain sensation
C. **A alpha fibers** ✓
D. C type of fibers
E. Fibers carrying touch and temperatore sensations

Q20. The myelin sheath to the nerve fibers in the central nervous system is provided by:

A. Schwann cells
B. Astrocytes
C. Microgliocytes
D. **Oligodendrocytes** ✓
E. Fibroblast

3/20

muscle is appro
in skeleial muscle.

ns
answer, all questions carry equal

Roll No

within 20 mins

of lymphatic flow is determined by:

lary hydrostatic fluid pressure
vity of lymphatic valves
vity of lymphatic vessels
ma colloidal osmotic pressure
of the above

wing is not true regarding Endothelin
from endothelium
is released from d
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Prevents excess
It is a Powerfu
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V
D.
E.

12. What is the resting membrane potential of the S-A nodal fibers?

A. -100 millivolts
B. -90 millivolts
C. -80 millivolts
D. -55 millivolts
E. -20 millivolts

13. Tetanization of heart is prevented by property of:

A. Conductivity
B. Excitability
C. Rhythmicity
D. Long refractory period
E. Short refractory period

14. Cause of refractory period in ventricular muscle is?

A. Slow conduction of action potential.
B. Slow closure of voltage gated potassium channels.
C. Closure of inactivation gates of sodium channels till RMP.
D. Calcium influx in plateau phase.
E. None of the above

15. Which activity of Cardiac valves produces the first heart sound?

A. Closure of Atrio-Ventricular Valves
B. Closure of Semilunar valves
C. Opening of Semilunar valves
D. Opening of Atrio – Ventricular valves
E. None of the above

16. Important histological features in cardiac muscle tissue responsible for excitation-contraction coupling is:

A. Markedly developed ER and triads
B. Well developed T-tubules (More length and volume).
C. Well developed Rymodine receptors.
D. C and D
E. Both B and C

17. According to Einthoven's law, if the QRS voltage is -1.0 millivolt in lead I and +2.0 millivolts in lead III, what is the QRS voltage in lead II?

A. 0.05 millivolt
B. 0.5 millivolt
C. 1.0 millivolt
D. 1.2 millivolts
E. 2.05 millivolts

18. Automaticity is best developed in the cells of SA node because SA nodal tissue has?

A. Na leak channels.
B. Slow calcium channels.
C. Voltage gated fast Na channels.
D. A and B
E. B and C

19. Which of the following conditions in ventricular muscle decreases the tendency for circus movement?

A. Administration of epinephrine
B. Dilated heart
C. Decreased conduction velocity
D. Repetitive electrical stimulation
E. Longer refractory period

20. Vagal stimulation results in the fall of heart rate. This is due to increased permeability of sinoatrial nodal fiber membrane to:

A. Ca^{++}
B. Cl^-
C. K^+
D. Na^+
E. Na^+ and Ca^{++}

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

R=52

TEST; Foundation Module Test

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS.ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50
TIME= 2 hours 10 min

DATED: 5-03-2019

SEQs

Q1.A) Define homeostasis. Enlist all the homeostatic parameters for normal cell functioning.
B) A 40 year old man came to the emergency department confused and feeling lethargic. On examination his B.P: 120/80, Pulse rate: 72b/min and normal respiratory rate. Following are the lab investigations serum electrolytes: Na = 142mmol/L, K = 4.2mmol/L, Blood gases showed PO_2: 95mmHg, PCO_2: 45mmHg, Blood glucose level = 50mg/dl. (3+2)

I. What is the probable diagnosis?
II. What treatment should be given to this patient?

Q2.A) What is a control system? Give its components. (2+1+2)
B) Enlist the mechanisms of functioning of control system?
C) Explain feed forward mechanism with the help of an example?

Q3.A) Compare the structure and function of smooth and rough endoplasmic reticulum.
B) Compare the functions of lysosomes and peroxisomes. (2.5+2.5)

Q4.A) Define Gene, Genetic code, Codon & Anticodon. (2+3)
B) Describe the mechanism of translation in detail?

Q5. Define gene expression & how is it regulated? Explain with the help of a diagram. (5)

Q6.A) Enlist all the means of transport across the cell membrane. (2+3)
B) Compare primary and secondary active transport with the help of examples.

Q7.A) Enlist the different modes of intracellular cell signaling. (4+1)
B) A 5 year old boy came to the outpatient department with history of severe malnutrition. On examination there is ascites (fluid accumulation in abdominal cavity) and edema of ankle and feet. What is the probable cause of edema in this patient?

Q8.A) Explain the forces involved in the formation of interstitial fluid? (2.5+2.5)
B) Define hyperkalemia and give its causes.

Q9.A) Enlist all the cell junction. (2+3)
B) Give the functions of tight and gap junctions in the body.

Q10. Define the following (5)

I. Ligand
II. Glycocalyx
III. G-Protein
IV. Osmole
V. Vmax

AHEED MEDICAL
LEGE LAHORE
BS 2012-17 (Physiology)

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single b

ICE QUESTIONS (MCQS)
tions carry

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A. Schwann cells
B. Astrocytes
C. Microgliocytes
D. Oligodendrocytes
E. Fibroblast

Upstroke → Na^+ channel open

D. depe...
F. The rate o... muscle is appro... in skeletal muscle.

...AHEED MEDICAL
...E LAHORE
...BBS 2012-17 (Physiology)
...st; Cell and membrane Physiology

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer, all questions carry equal marks.

Dated: 11/02/2013

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

Q1. "Milieu inferieur" is the internal environment provided in a multicellular organism like humans by

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid ...

AZRA NAHEED MEDICAL COLLEGE
LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2015-2016

Leghari

UNIT TEST: Circulation
Date: 13-07-16

MULTIPLE CHOICE QUESTIONS (MCQs) Total Marks 20.
Time = 20mins
Select single best answer, all questions carry equal marks.

Name M.MUBEEN Roll No

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins
2-Any cutting and overwriting in objective part will not be accepted

Q1. The increased viscosity of blood due to polycythemia may not cause one of the following:
A. Decreases blood flow to different body areas
B. Increases laminar flow
C. Decreases turbulent flow
D. Increases preload
E. Increases venous return

Q2. The vasodilatation of systemic blood vessels occur due to?
A. Stimulation of sympathetic nervous system
B. Inhibition of sympathetic activity on blood vessel
C. Stimulation of vagus wave to blood vessels
D. Release of nitric oxide by endothelial cells
E. B & D

Q3. Following is the true sequence of events in development of hypertension
A. Increased PR→Increased CO→Increased BP
B. Increased ECF vol→ Increased CO→ Increased PR→ Increased BP
C. Decreased renal functional tissue→IncreasedECF vol→ Increased CO→ Increased PR→ Increased BP
D. Decreased PR→increased BP→ Decreased renal functional tissue
E. None of the above

Q4. Mean arterial Pressure is?
A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic blood pressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

Q5. Which of the following does not effect the pulse pressure:
A. Stroke volume output of heart
B. Compliance of arterial tree
C. Old age and emotional upset
D. Atherosclerosis of blood vessel wall
E. Capillary circulation

Q6. The rate of lymphatic flow is determined by:
A. Capillary hydrostatic fluid pressure
B. Activity of lymphatic valves
C. Activity of lymphatic vessels
D. Plasma colloidal osmotic pressure
E. All of the above

Q7. Following is not true regarding Endothelin released from endothelium :
A. It is released from damaged endothelium
B. It is a Powerful vasoconstrictor
C. Prevents excessive bleeding from arteries
D. It is a Powerful vasodilator
E. It is a peptide

Q8. Which of the following parts of circulation has highest compliance?
A. Capillaries
B. Large arteries
C. Veins
D. Aorta
E. Small arteries

Q9. Stimulation of baroreceptors leads to:
A. Increase in blood pressure
B. Increase in heart rate
C. Decrease in blood pressure and decrease in heart rate
D. Increase in blood pressure and decrease in heart rate
E. Increase in blood pressure and increase in heart rate

Q10. Which is true regarding the vasomotor center:
A. Is located in the upper portion of the pons
B. Decreases its sympathatic activity to the blood vessels when blood pressure falls
C. May not be blocked by spinal anesthesia
D. Does not induce vaso-constriction or vaso-dilatation
E. Concerned with caliber of blood vessels & rate of heart beat

AZRA NAHEED MEDICAL COLLEGE
LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2017-2018

TEST: 3rd TERM
Date: 13-08-18

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 50,
Time = 50 mins
Select single best answer, all questions carry equal marks.

NAME:_____ **ROLL NO:**_____

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins
2-Any cutting and overwriting in objective part will not be accepted

1- **A 20 year old medical student participates in a 100 meter race on her college sports week. Which of the following muscles she will use for expiration?**
A. External intercostals & diapharagm
B. Internal intercostals & rectus abdominus
C. Sternocliedomastoid
D. Anterior serrate
E. Diaphragm only

2- **A 45 year old woman has an expiratory reserve volume (ERV) of 1100ml, inspiratory reserve volume (IRV) of 3000ml, tidal volume is 600ml and total lung capacity is 6000ml. What is his residual volume?**
A. 1300ml
B. 1200ml
C. 1000ml
D. 1400ml
E. Residual volume cannot be calculated

3- **The extra volume of air that can be inspired over & above the normal tidal volume is called**
A. Expiratory reserve volume
B. Inspiratory capacity
C. Vital capacity
D. Inspiratory reserve volume
E. Functional residual capacity

4- **In which organ blood vessels, hypoxia causes vasoconstriction**
A. Heart
B. Lungs
C. Brain
D. Muscle
E. Skin

5- **Which of the following statement is correct regarding the net rate of diffusion of gases in fluids?**
A. The rate of diffusion decreases with the pressure difference
B. It decreases with the solubility of gas in the fluid
C. Is directly proportional to the cross- sectional area of the diffusion pathway
D. Increases with the distance through which gas must diffuse
E. Increases with the increase in the molecular weight of the gas molecules

6- **A 17 year old boy presents in the outpatient department with a lump in the neck area. Biopsy was done which showed carcinoma of parotid gland. During the surgery of parotid gland there was injury to the glossopharangeal nerve. Which of the following respiratory reflex will be impaired?**
A. Aortic chemoreceptor reflex
B. Carotid chemoreceptor reflex
C. Baroreceptor reflex
D. Both aortic and carotid chemoreceptor reflexes
E. Respiratory reflexes are not affected by damage to the glossopharangeal nerve.

7- **The percentage of blood that gives up its oxygen as it passes through the tissue capillaries is called "Utilization Coefficient": What is its value during strenuous exercise?**
A. 75%-85%
B. 40%-50%
C. 25%
D. 85%-100%
E. 50%75%

8- **In a resting state, what is the amount of O2 released from Hemoglobin, when systemic arterial blood flows through the tissues?**
A. 5ml/100ml of blood flow
B. 19.4ml/100ml of blood flow
C. 14.4ml/100ml of blood flow
D. 15ml/100ml of blood flow
E. 10ml/100ml of blood flow

9- **Which of the following factor will contribute in the formation of pleural effusion?**
A. Increased plasma colloid osmotic pressure
B. Decreased capillary hydrostatic pressure
C. Breaking of the capillary membrane due to inflammation of the surface of pleural cavity
D. Decreased interstitial colloid osmotic pressure
E. Increased lymphatic drainage

10- **A 70 year old female came to the out patient department with complain of shortness of breath while performing daily activities. Her old chest CT scan shows pulmonary fibrosis. Which of the following lab values are consistent with her diagnosis?**
A. Increased residual volume
B. Decreased FEV_1/FVC
C. Increased resistance to the airways
D. Decreased tital lung capacity
E. Increased vital capacity

11- **A 35 year old woman collapsed and was found dead in her home. Later autopsy was done which revealed that a blood clot that traveled to her lung caused her death. Which of the following will occur if an embolus totally blocks blood flow to an alveolus?**
A. The V/Q ratio will decrease
B. The V/Q ratio will increase
C. There will be decrease in the physiological dead space
D. The physiological shunt of the lung will increase
E. The PO2 of alveolus will be equal to the PO2 of mixed venous blood

DICAL
RF

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPERTMENT
1ST YEAR MBBS 2013-14
UNIT TEST: NERVE & MUSCLE PHYSIOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS)

Total Marks 20, Time = 20mins

Select Single best answer, all questions carr
equal marks.

ROLL #:_____ DATED: 12-03-14

INSTRUCTIONS

1. All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2. [illegible] and overwriting in objective part will not be accepted.

Q1. Unmyelinated nerve conduction and saltatory conduction differs in that:

A. In unmyelinated nerve conduction energy is not a problem.
B. In unmyelinated nerve conduction velocity is slow.
C. **In unmyelinated nerve conduction more energy is required and velocity is slow.** ✓
D. In saltatory nerve conduction more energy is required, velocity is slow and less space is utilized
E. None of the above

Q2. Chronaxie is defined as:

A. Double the rheobasic strength of stimulus
B. **Minimum time required to excite the fiber when strength of the current used is double the rheobasic strength.** ✓
C. Minimum time required to excite the tissue when strength of the current is minimum.
D. Threshold voltage
E. Maximum strength of stimulus.

Q3. Skeletal muscle contraction is terminated by which action?

A. Removal of acetylcholine from the neuromuscular junction.
B. Removal of Calcium from the terminal of the motor nerve.
C. Closure of the post-synaptic nicotinic acetylcholine receptor.
D. **Removal of sarcoplasmic calcium** ✓
E. Return of dihydropyridine receptor to its resting conformation.

Q4. In what way does visceral smooth muscle differ from skeletal muscle?

A. **Visceral smooth muscle can contract in response to stretch.** ✓
B. Visceral smooth muscle does not contain actin filaments.
C. Visceral smooth muscle is capable of generating only about half the maximal force of contraction.
D. Contraction of visceral smooth muscle is ATP dependent.
E. The rate of cross bridge cycling in visceral smooth muscle is approximately 100 times faster than that in skeletal muscle.

Q5. Calmodulin is most closely related, both structurally and functionally to which of the following proteins?

A. G- actin
B. Troponin I
C. **Troponin C** ✓
D. Tropomyosin
E. Myosin light chain

Q6. The resting potential of a myelinated nerve fiber is primarily dependent on the concentrate ion gradient o which ion?

A. **K^+** ✓
B. Na^+
C. Ca^{++}
D. Cl^-
E. HCO_3^-

Q7. Smooth muscle contains:

A. Z membranes for anchoring of actin filaments
B. Titin to keep actin and myosin at their places
C. **Dense bodies for actin filaments** ✓
D. Troponin C for Ca attachment
E. Many nuclei in each cell

Q8. Which of the following drugs would likely to eliminate the patient's symptoms in myasthenia gravis'

A. Curare
B. Atropine
C. **Neostigmine** ✓
D. Botulinum toxin antiserum
E. Halothane

Q9. Stimulation of nicotinic receptors by acetylcholine causes:

A. **Contraction of skeletal muscles** ✓
B. Decrease in heart rate
C. Secretion of saliva
D. Constriction of pupil
E. Contraction of gut

ED MEDICAL
LAHORE
(Physiology)

MULTIPLE CHOICE QUESTIONS (MC
Total Marks 20
Select Single

MULTIPLE CHOICE QUESTIONS (MCQS)

extras

Bevysigh Abdul Rauf

RA NAHEED MEDICAL
COLLEGE LAHORE
Send up examination, MBBS 2011-16
(Physiology)

INSTRUCTIONS
-All objective questions are to be attempted on the paper and returned to the invigilator within 60 mins
-Any cutting and overwriting in objective part will not be accepted

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 50 Total Time 60 mins

Select Single best answer, all questions carry equal marks.

1. The fluid outside the cell called as extracellular fluid is also called as:
   A. External environment
   B. Milieu interieur
   C. Outer environment
   D. Inner environment
   E. Simple environment
2. Total body fluid is 42 liters in normal adult man and is 60 % of the body. The fluid is distributed as:
   A. One third intra cellular, one third extra cellular and remaining in blood.
   B. One third intra cellular, two third extra cellular
   C. Two third intra cellular, one third extra cellular
   D. One third intracellular, Remaining in plasma, RBCs and intra cellular
   E. None of the above
3. The red blood cells are discharged from the bone marrow into the blood stream usually as
   A. Pronormoblast
   B. Early normoblast
   C. Intermediate normoblast
   D. Normoblast
   E. Reticulocyte
4. The following cell is devoid of the hemoglobin
   A. Erythrocyte
   B. Reticulocyte
   C. Proerythroblast
   D. Intermediate normoblast
   E. Late Normoblast
5. Red cells have no mitochondria, therefore can not use
   A. Water
   B. Protein
   C. Fats
   D. NADH
   E. O2
6. For in the blood is carried
   A. Apoferritin
   B.
   C.

16. Which of the following statements about skeletal
    D.
    E. Activation of platelets
8. A 6 year old boy bruises easily and has previously bleeding gums. The maternal grandfather also has a bleeding disorder. You suspect the deficiency of
   A. Prothrombin activator
   B. Factor II
   C. Factor VIII
   D. Factor X
   E. FactorXIII
9. Intrinsic pathway of blood coagulation is a slow process as compared to the extrinsic pathway. It is initiated due to blood trauma or contact of blood with collagen. Which factor is activated initially in this pathway?
   A. Factor VII
   B. Factor II
   C. Factor XII
   D. Factor Xa
   E. Factor X
10. Which of the following applies to an AIDS patient?
    A. They are capable of generating a normal antibody response.
    B. They have increased helper T cells
    C. They have increased secretions of inter-leukins
    D. They have decreased helper T cells
    E. They have decreased red blood cells
11. In a transfusion reaction
    A. There is agglutination of the recipient blood.
    B. Shut down of kidneys following a transfusion reaction
    C. Transfusion of Rh+ blood into Rh -ve recipient will result in an immediate transfusion reaction.
    D. A person with type O blood is considered to be a universal recipient
    E. A person with type AB blood is considered to be a universal donor
12. The albumin a plasma protein is present in maximum amount in plasma and its main function is to
    A. To exert hydrostatic pressure that pushes the fluid out of the blood vessels
    B. To exert colloidal osmotic pressure that keeps the fluid inside the blood vessels
    C. Transport hormones, drugs
    D. Active in blood clotting
    E. Takes part in inflammation
13. Which cardiac event follows P wave?
    A. atrial contraction
    B. ventricular contraction
    C. Atrial filling
    D. Ventricular filling
    E. Both A & B
14. Increase in P-R interval is due to
    A. 1st degree heart block
    B. 2nd degree heart block
    C. Complete heart block
    D. Atrial flutter
    E. Cardiac arrest

STIONS (MCQs) Total

ll questions carry equal

Roll No

tic flow is determined by:

fluid pressure

Which of the following structures has the slowest rate of conduction of the cardiac action potential?

F. Atrial muscle
G. Anterior intermodal pathway
H. **Atrioventricular bundle fibers**
I. Purkinje fibers
J. Ventricular muscle

A) resting membrane
more negative
B) As the membrane poten
muscle, intensity of action p
C) **The heart becomes flaccid**
D) Heart contractility becomes
E) Increases the conduction of
from atria to ventricles through the

Tetanization of heart is prevented by property of,
A) Conductivity
B) Excitability
C) Rhythmicity
D) **Long refractory period**
E) Short refractory period

Cause of refractory period in ventricular muscle is,
A) Slow conduction of action potential.
B) Slow closure of voltage gated potassium channels.
C) **Closure of inactivation gates of sodium channels till RMP.**
D) Calcium influx in plateau phase.

Important histological features in cardiac muscle tissue responsible for excitation-contraction coupling is,
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B) Slow calcium channels.
C) Voltage gated fast Na channels.
D) **A and B**
E) B and C

Hyperkalemia causes,

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

NUTRITION MODULE TEST

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 50
TIME = 2 Hrs 10 min

DATED: 1-10-2019

Q1.A) Define ANS. Compare the effects of sympathetic and parasympathetic nervous system on heart, GIT, eyes, blood vessels & urinary system?
B) A 30 year old man went on vacations to jungle safari in Africa with his family. There they had a close encounter with a raging lion. What type of reaction will be initiated in him to cope up the situation? Explain all the features of this reaction? (3+2)

Q2. Classify all the autonomic receptors. Explain in detail the location and functions of Adrenergic & Muscarinic receptors? (5)

Q3.A) Compare the effects of epinephrine and norepinephrine on body during sympathetic stimulation. (2.5+2.5)
B) Give in detail the outflow of Symapathetic & Parasympathetic nervous system.

Q4. Define set point of temperature. What is the mechanism by which pyrogens cause fever? (5)

Q5.A) Describe the mechanism of formation of sweat in the sweat glands? (3+2)
B) Describe the mechanism of acclimatization to heat?

Q6. Define core body temperature. What is the role of hypothalamus in the regulation of core body temperature? (5)

Q7. Define heart failure. Explain in detail the features of decompensated heart failure. (5)

Q8. Explain in detail the features of compensated heart failure? (1+1+2+1)

Q9. Define the following
- **A. Heat stroke**
- **B. Crisis or flush**
- **C. Frost bite**
- **D. Insulator system of body**

Q10.A) Enlist and outline the autonomic reflexes. Cardic, Respiration, Digestive
B) What important autonomic functions are controlled at brain stem level. (3+2)

36-375
97-995

COLLEGE LAHORE

MBBS 2012-17 (Physiology)

rst test; Cell and membrane Physiology

Total marks 20

Select Single best answer, all questions carry equal marks.

Dated: 11/02/2013

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator within 30 mins.
2-Any cutting and overwriting in objective part will not be accepted.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:

A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the control systems of the body act by:

A. Feed forward mechanism
B. Adaptive feedback mechanism
C. Positive feedback mechanism
D. Neutral feedback mechanism
E. Negative feedback mechanism

Q3. Gain of a control system is:

A. Correction multiplied by error
B. Correction divided by error
C. Error/correction
D. Is less if correction is more
E. Is more if error is more

Q4. Entire outside surface of the cell has a loose carbohydrate coat called:

A. Cell membrane
B. Cell wall
C. Glycocalyx
D. Glycoproteins
E. Peripheral space

Q5. The organelle of the cell that synthesizes the fatty substances including steroid hormones is

A. Golgi apparatus
B. Nucleus
C. Ribosome
D. Rough endoplasmic reticulum
E. Smooth endoplasmic reticulum

Q6. The human cell mitochondria is a

A. membrane organelle
B. Contains enzymes for citric acid cycleand heme formation
C. Has enzymes for oxidative phosphorylation
D. Generates ATP
E. All of the above

Q7. Synthesis of carbohydrates like chondroitin sulphate and hyaluronic acid is the function of

A. RER
B. SER
C. Golgi apparatus
D. Peroxisomes
E. Lysosomes

Q8. The substrate for common pathway of glucose, amino acid and fatty acid metabolism in mitochondria is:

A. Acetyl CoA.
B. Succinyl CoA.
C. Lactic acid.
D. Pyruvic acid
E. Citric acid

Q9. All of following have limiting membrane EXCEPT

A. Golgi apparatus
B. Endoplasmic reticulum
C. Nucleus
D. Lysosomes
E. Nucleolus

Q10. Which of the following organelle is responsible for autolysis of dead cells?

A. Lysosomes
B. Rough endoplasmic reticulum
C. Peroxisomes
D. Secretory vesicles
E. Golgi apparatus

Q11. A 6 year old girl is suffering from liver enlargement after investigation

...Golgi
...Oxidative phosphorylation
C. Involved in metabolism of drugs
D. Glycolysation and packaging of proteins
E. All of the above

AZ NAHEED MEDICAL COLLEGE LAHORE

MBBS 2012-17 (Physiology)

Test: Cell and membrane Physiology

Q1. "Milieu interieur" environme...

MULTI... Total M... Select S... carry eq...

Leghari

NAHEED MEDICAL COLLEGE
ORE

MBBS 2015-16 (Physiology)

SYSTEM TEST: HEART PHYSIOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks: 20
Select Single best answer,
All questions carry equal marks.

Dated: 09-05-2016

INSTRUCTIONS:

1. All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2. ...

Q1. Propegation of action potential is the fastest in which of the following myocardial conducting tissue:

A. Internodal pathway
B. Atrioventricular bundle
C. Purkunjie fibers
D. Ventricular muscle
E. Bundle of His

Q2. A 70 year old Hamid was brought to emergency with history of sudden faintness.On examination,his pulse rate is 40 /minute and became unconscious after an hour with normal BP and heart rate. ECG changes recorded during faintness are75 P waves per minute and 35 QRS waves per minute, with a normal QRS width. Which of the following is the most likely diagnosis?

A. First degree atrio ventricular block
B. Stokes Adams syndrome
C. Atrial paroxysmal tachycardia
D. A,B and C are true
E. Atrial premature contractions

Q3. Which of the following type of ionic channels are responsible for the plateu in ventricular muscles of heart?

A. Fast calcium channels
B. Sodium leak channels
C. Voltage gated sodium channels
D. Voltage gated calcium channels
E. Voltage gated potassium channels

Q4. Which of the following is the cause of AV-nodal delay

A. Presence of large sized muscular fibers
B. Diminished number of gap junctions in AV nodal fibers
C. Opening of potassium channels
D. Lack of slow Ca++ Na++ channels
E. All of the above

Q5. Below is the ECG record of a person who died [illegible] this record.Diagnose the arrhythmia?

A. Atrial fibrillation
B. Atrial flutter
C. Ventricular fibrillation
D. Complete heart block
E. Sinus arrythmia

Q6.The heart rate increase (tachycardia) occurs in which of the following conditions

A. Fever
B. Anemia
C. Hyperthyroidism
D. Sleep
E. A,B and C are true.

Q7.The best index of left ventricular function on echocardiography is:

A. Central venous pressure
B. Ejection fraction
C. Stroke volume
D. Pulmonary capillary wedge pressure
E. Holter monitor

Q8. This increased contractility of heart in response to increased volume of inflowing adapt to inflowing blood is called

A. Frank starling law
B. Ohms law
C. Mareys law
D. All or none law
E. Einthoven's law

Q9. A 4 years old child was brought to the physician Mother gives history of excessive breathlessness during and after exercise. During auscultation a Machinery murmur which is present both in systole and diastole is heard over the left sternal border. X-ray chest shows boot shaped heart .Following is the most likely diagnosis

A. Aortic Stenosis
B. Aortic Regurgitation
C. Patent ductus atriosus
D. Pericardial effusion
E. All of the above

Q 10.Regarding ECG changes in acute myocardial infarction , choose the best statement

A. PR-interval is prolonged.
B. No change occurs in ST-segment
C. P-Wave is absent.
D. ST-segment elevation and T- wave inversion
E. Narrowing of QRS complex

Roll No.

Anatomy Department

AZRA NAHEED MEDICAL COLLEGE, Lahore

Final Stage Upper Limb, 1st Year MBBS (Session 2013)

Date: 20-01-2014

Total Allowed: 1 hr 20 Minutes **Total Marks:** 50 **Pass Marks:**

SEQs:

Q1. a) Name the arteries with their origin that take part in anastomosis around scapula. 83. 2.5

b) Give the attachments and nerve supply of main extensor of elbow joint triceps brachii 2.5

Q2. Explain the mechanism of abduction with names of muscles involved. 143. 5

Q3. Write in a tabulated form the origin, insertion, nerve supply and actions of the muscles attached to the lateral border of scapula. 11

Q4. a) Draw & label superficial palmar arch. 119. 2.5

b) Write location, extent, communication & boundaries of mid palmar space. 123. 2.5

Q5. a) Mention the boundaries and contents of cubital fossa. 92. 3.5

b) Give its clinical importance. 98. 1.5

Q6. a) Name the structures formed by deep fascia in front of the wrist and palm. 1

b) What is carpal tunnel syndrome? 133 2

c) Explain dupuytren's contracture. 133. 2

Q7. Write boundaries and contents of:

a) Quadrangular space 83 2

b) Triangular space 82. 2

c) What is Frozen shoulder 153.

Q8. a) Give the attachments of medial & lateral intermuscular septa of the arm.

b) Name the structures piercing the medial intermuscular septum of arm.

c) Write the ossification of lower end of humerus.

Q9. a) Name the branches of Musculocutaneous nerve. 89.

b) Define avulsion fracture of greater tubercle of humerus & give its clinical features.

c) Which is the best place to compress the brachial artery to control hemorrhage?—

Q10. a) What is klumpke's paralysis 58.

b) Write relations of cords of brachial plexus to 2nd part of axillary artery 56.

c) Enumerate the branches of medial cord of brachial plexus. 55

d) What is meant by brachial plexus block—.

Viva during Surgicals

Shoulder

Elbow

Hand

3- At what membrane voltage does the voltage gated Na+ channels become activated?

A. -90mV

B. -65mV

C. 0mV

D. -65V

E. +35mV

B

AZ[illegible] NAHEED MEDICAL
COLLEGE LAHORE
MBBS 2012-17 (Physiology)
First Test: Cell and membrane Physiology

INSTRUCTIONS
[illegible] objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

MULTIPLE CHOICE QUESTIO
Total Marks 20
Select Single best answer, all q
carry equal marks.

Dated: [illegible]

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by
A. Intracellular fluid
(B) Extracellular fluid
C. Transcellular fluid

Q6. The human cell mitochondria is a
A. membrane organelle

NAHEED MEDICAL
COLLEGE
LAHORE
Department of Physiology
1ST YEAR MBBS 2013-14
Test: CIRCULATORY SYSTEM

(MCQS) Total marks 20, time [illegible]
Select Single best answer, all questions [illegible]
carry equal marks.
ROLL #: _____ DATE: 14-05-[illegible]

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

1. Which of the following increases the plateau level of cardiac output curve?
   A. Myocarditis
   B. Cardiac temponade
   C. Myocardial infarction
   D. Mitral stenosis
   (E) Decreased parasympathetic stimulation of heart

2. Total peripheral resistance increases in which of the following?
   A. Anemia
   B. Exercise
   C. Sympathetic stimulation
   D. Arteriovenous fistula
   (E) None of the above

Circulation

3. Regarding systemic vascular resistance, choose the best statement?
   A. Is less than the pulmonary vascular resistance
   B. Directly proportional to the blood flow of an organ
   C. Is inversely proportional to the viscosity of blood
   (D) Mainly effects the diastolic blood pressure
   E. Is not affected by the sympathetic stimulation

4. Which of the following would be expected to occur during central nervous system ischemic response?
   A. Decreased heart rate
   B. Increased parasympathetic stimulation
   C. Decreased total peripheral resistance
   (D) Enhanced sympathetic stimulation and generalized vasoconstriction
   E. Decreased arterial blood pressure

5. In which of the following conditions there will be a decreased cardiac output?
   A. Hyperthyroidism
   B. Beriberi
   C. Atrioventricular fistula
   D. Anemia
   (E) Acute myocardial infarction

6. Right ventricular failure leads to:
   A. Pulmonary edema
   B. Reduced systemic arterial pressure
   C. Decreased concentration of aldesterone in the blood
   (D) Edema of feet
   E. Edema of face

7. Which of the following does not cause hypo effective heart?
   A. Inhibition of sympathetic nervous excitation of heart
   B. Coronary artery blockage
   C. Valvular heart disease
   D. Cardiac hypoxia
   (E) Sympathetic stimulation

8. Which is not true regarding second heart sound?
   (A) Duration of second heart sound is about 0.11 second
   B. Vibration produced by sudden closure of semilunar valves
   C. Dub is indicative for second heart sound
   (D) Second heart sound duration is more than first heart sound
   E. Audible with the stethoscope

9. Mean arterial Pressure is?
   A. Systolic blood pressure+ Diastolic blood pressure / 2
   B. It's value is nearer to systolic blood pressure than diastolic blood pressure
   C. 50% of sum of Systolic and Diastolic blood pressure
   D. Systolic blood pressure – Diastolic blood pressure
   (E) 1/3 Pulse pressure+ Diastolic blood pressure

10. Which of the following structures are not innervated?
    A. Arterioles
    B. Post capillary venules
    C. Venules
    (D) Pre-capillary sphincters
    E. Arteries

AZRA NAHEED MEDICAL COLLEGE
LAHORE

1ST YEAR MBBS, 2013-14
(PHYSIOLOGY)

INSTRUCTIONS

1-All subjective part is to be submitted within 40mins, no extra time will be given.
2-Neat handwriting, use of margins will increase the outlook /presentation of your paper.

SYSTEM TEST: RESPIRATORY SYSTEM

SUBJECTIVE PART

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

TOTAL MARKS 30 **Time = 40mins**

DATE: 11-06-14

1. **A) Draw and label Oxy – Hb dissociation curve. Also show the point for P50?** (3)
   B) Enlist the factors shifting the curve to right. (2)

2. **A) Describe in detail the nervous control of respiration?** (2)
   B) Define compliance. Explain it with help of compliance graph. List the factors on which it depends (3)

3. **A) Give an account of mechanism of inspiration.** (2.5)
   B) Define hypoxia. Give its types. Explain briefly the hypoxic hypoxia. (2.5)

4. **A) Draw and label the respiratory membrane.** (2.5)
   B) Explain the factors effecting the rate of diffusion of gases across the respiratory membrane in the form of equation. (2.5)

5. **Define and explain the following terms:** (1+3+1)
   - **a) Bohr effect** (1)
   - **b) Carbon dioxide carriage in blood** (3)
   - **c) Cyanosis** (1)

6. **A) Outline the changes in respiratory system during exercise.** (3)
   B) A policeman received a gunshot wound to the right side of his chest wall. He was rushed to the hospital where on examination he had severe dyspnea, decrease respiratory movements of chest wall on right side, tracheal deviation to the left side, decrease breath sounds on right side of chest on ascultation.
   - **a) What is the patient suffering from?** (0.5)
   - **b) Justify how there is decreased chest expansion in this patient and further chain of events in this patient if he does not receive treatment?** (1)
   - **c) What effect will his condition have on PO_2 and PCO_2 in blood?** (0.5)

NAHEED MEDICAL
AZ[illegible] COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer, all questions carry equal marks.

INSTRUCTIONS
Dated: 11/02/2013

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:

A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the control [illegible] body [illegible]

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cycle and heme formation
C. Has enzymes for oxidative phosphorylation
D. Generates ATP
E. All of the above

Q7. Which of the following parts of circulation has highest compliance?

A. Capillaries
B. Large arteries
C. Veins
D. Aorta
E. Small arteries

Q12. Loss of BLOOD after a history of ACCIDENT is indicative of:

A. Hypovolemic shock
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

Q13. Angiotensin 2 restores the BP by?

A. Arteriolar vasoconstriction
B. Increasing ADH level
C. Increasing thirst
D. Increasing aldosterone level
E. All of the above

vasopressin

Q14. Which is not true regarding second heart sound?

A. Duration of second heart sound is about 0.11 second
B. Vibration produced by sudden closure of semilunar valves
C. Dub is indicative for second heart sound
D. Second heart sound duration is more than first heart sound
E. Audible with the stethoscope

0.105 to 0.145
0.105 to 0.175

Q15. Which of the following vessel offer greatest resistance to blood flow?

A. Arteries
B. Arterioles
C. Capillaries
D. Venules
E. Veins

Q16. The vasomotor center:

A. Is located in the upper portion of the pons
B. Decreases its sympathetic activity to the blood vessels when blood pressure falls
C. May not be blocked by spinal anesthesia
D. Does not induce vaso-constriction or vaso-dilatation
E. Concerned with caliber of blood vessels & rate of heart beat

Q17. Loss of vasomotor tone after a history of spinal anesthesia is indicative of:

A. Hypovolemic shock.
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

Q18. Venous return to the heart is increased by:

A. Decreased blood volume
B. Decreased sympathetic tone
C. Increase in contraction of skeletal muscles
D. Increase in negativity of the thoracic pressure from -4 to-8 mm Hg
E. Increase in pressure in right atrium

Q19. Which of the following conditions often occur in compensated hemorrhagic shock?

A. Decreased heart rate
B. Stress relaxation
C. Decreased ADH (hormone) release
D. Decreased absorption of interstitial fluid through capillaries.
E. CNS ischemic response

↑ Arterial Pressure Baroreceptor Reflex

Q20. The percentage of the end diastolic volume which is ejected out in one systole or one stroke is 65%. This is called:

A. Stroke volume
B. Cardiac output
C. Ejection fraction
D. End diastolic volume
E. End systolic volume

The Percentage of end Diastolic volume ejected in one systole or stroke is called Ejection fraction

pressure
ure not

NAHEED MEDICAL COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Cell and

MULTIPLE CHOICE QUESTIONS
Total Marks 20

NAHEED MEDICAL
COLLEGE
MBBS 2013-
SYST
BLOOD

MULTIPLE CHOICE QUESTIONS (MCQ
MCQS)

Q2. In which of the following conditions there will be a decreased cardiac output?

A. Hyperthyroidism
B. Diabetes
C. Arteriosclerotic heart disease
D. Anemia
E. Acute myocardial infarction

Q3. Right ventricular failure leads to

A. Pulmonary edema
B. Reduced systemic arterial pressure
C. Decreased concentration of aldosterone in the blood
D. Edema of feet
E. Edema of face

Q4. Stimulation of baroreceptors leads to

A. Increase in blood pressure
B. Increase in heart rate
C. Decrease in blood pressure and decrease in heart rate
D. Increase in blood pressure and decrease in heart rate
E. Increase in blood pressure and increase in heart rate

Q5. Vessels which are not under sympathetic tone are

A. Arterioles
B. Capillaries
C. Veins
D. Small arteries
E. Large arteries

6. Following conditions may result from the long standing hypertension except:

A. Renal failure
B. Heart failure
C. Renal vascular disease
D. Myocardial infarction
E. Hepatitis

Q7. Which of the following sets of differences best describes the hemodynamics of the pulmonary circulation when compared with systemic circulation?

	(Flow)	(Resistance)	(Arterial Pressure)
A.	Higher	Higher	Higher
B.	Higher	Lower	Lower
C.	Lower	Higher	Lower
D.	Lower	Lower	Lower
E.	Same	Lower	Lower

8. Both the arterial and venous pressures come to equilibrium when al flow in the systemic circulation ceases at a pressure of 7mmHg and this is called?

A. Mean systemic filling pressure
B. Mean arterial pressure
C. Mean venous return
D. Equilibrium pressure
E. Mean blood pressure

9. Immediately after an acute coronary occlusion blood flow ceases in the coronary vessels beyond the occlusion except for small amounts of collateral flow from surrounding vessels and results in ischemic necrosis of heart muscles. This phenomenon is called:

A. Angina pectoris
B. Atrial fibrillation
C. Cardiac tamponade
D. Myocardial infarction
E. Pericarditis

10. Coronary blood flow increases during:

A. Systole
B. Diastole
C. Repolarization of ventricle
D. Depolarization of ventricle
E. None of the above

Q11. Which of the following parts of circulation has highest compliance?

A. Capillaries
B. Large arteries
C. Veins
D. Arteries
E. Small arteries

Q12. Loss of BLOOD after a history of ACCIDENT is indicative of

A. Hypovolemic shock
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C. Increasing thirst
D. Increasing aldosterone level
E. All of the above

Q14. Which is not true regarding normal heart sound?

A. Duration of second heart sound is about 0.12 second
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D. Second heart sound duration is more than first heart sound
E. Audible with the aids scope

Q15. Which of the following vessel offer greatest resistance to blood flow?

A. Arteries
B. Arterioles
C. Capillaries
D. Venules
E. Veins

Q16. The vasomotor center:

A. Is located in the upper portion of the pons
B. Decreases its sympathetic activity as the blood vessels stretch
C. May not be blocked by spinal anesthesia
D. Does not induce vaso-constriction or vaso-dilatation
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Q17. Loss of vasomotor tone after a history of spinal anesthesia is indicative of.

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B. Neurogenic shock
C. Septic shock
D. Anaphylactic shock
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A. Decreased blood volume
B. Decreased sympathetic tone
C. Increase in contraction of skeletal muscles
D. Increase in negativity of the thoracic pressure from -4 to -8 mm Hg
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Q19. Which of the following conditions often occur in compensated hemorrhagic shock?

A. Decreased heart rate
B. Stress relaxation
C. Decreased ADH (hormone) release
D. Decreased absorption of interstitial fluid through capillaries
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Q20. The percentage of stroke diastolic volume which is ejected out in one systole or one stroke is 65%. This is called:

A. Stroke volume
B. Cardiac output
C. Ejection fraction
D. End diastolic volume
E. End systolic volume

AHEED MEDICAL
LEGE LAHORE
2012-17 (Physiolog

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single b

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ICE QUESTIONS (MCQS)
carry

Q1. Which of the follow

AZRA NAHEED MEDICAL COLLEGE LAHORE

Department of Physiology
1ST YEAR MBBS 2013-14
System Test: CIRCULATORY SYSTEM

MULTIPLE CHOICE QUESTIONS (MCQS) Total Marks 20, Time = 20mins
Select Single best answer, all questions carry equal marks.

ROLL #:_____ DATE: 14-05-14

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective part will not be accepted.

1. **Which of the following increases the plateau level of cardiac output curve?**
   - A. Myocarditis
   - B. Cardiac tamponade
   - C. Myocardial infarction
   - D. Mitral stenosis
   - E. **Decreased parasympathetic stimulation of heart** ✓

2. **Total peripheral resistance increases in which of the following?**
   - A. Anemia
   - B. Exercise
   - C. Sympathetic stimulation
   - D. Arteriovenous fistula
   - E. **None of the above** ✓

3. **Regarding systemic vascular resistance, choose the best statement?**
   - A. Is less than the pulmonary vascular resistance
   - B. Directly proportional to the blood flow of an organ
   - C. Is inversely proportional to the viscosity of blood
   - D. **Mainly effects the diastolic blood pressure** ✓
   - E. Is not effected by the sympathetic stimulation

4. **Which of the following would be expected to occur during central nervous system ischemic response?**
   - A. Decreased heart rate
   - B. Increased parasympathetic stimulation
   - C. Decreased total peripheral resistance
   - D. **Enhanced sympathetic stimulation and generalized vasoconstriction** ✓
   - E. Decreased arterial blood pressure

5. **In which of the following conditions there will be a decreased cardiac output?**
   - A. Hyperthyroidism
   - B. Beriberi
   - C. Atrioventricular fistula
   - D. Anemia
   - E. **Acute myocardial infarction** ✓

6. **Right ventricular failure leads to:**
   - A. Pulmonary edema
   - B. Reduced systemic arterial pressure
   - C. Decreased concentration of albumin in the blood
   - D. **Edema of feet** ✓
   - E. Edema of face

7. **Which of the following does not cause hypo effective heart?**
   - A. Inhibition of sympathetic nervous excitation of heart
   - B. Coronary artery blockage
   - C. Valvular heart disease
   - D. Cardiac hypoxia
   - E. **Sympathetic stimulation** ✓

8. **Which is not true regarding second heart sound?**
   - A. **Duration of second heart sound is about 0.11 second** ✓
   - B. Vibration produced by sudden closure of semilunar valves
   - C. Pulse is indicative for second heart sound
   - D. Second heart sound duration is more than first heart sound —
   - E. Audible with the stethoscope -

9. **Mean arterial Pressure is?**
   - A. Systolic blood pressure+ Diastolic blood pressure / 2
   - B. It's value is nearer to systolic blood pressure than diastolic blood pressure
   - C. 50% of sum of Systolic and Diastolic blood pressure
   - D. Systolic blood pressure – Diastolic blood pressure
   - E. 1/3 Pulse pressure+ Diastolic blood pressure ✓

10. **Which of the following structures are not innervated?**
    - A. Arterioles
    - B. Post capillary venules
    - C. Venuoles
    - D. **Pre-capillary sphincters** ✓
    - E. Arteries

R ✗ 52

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

MID MODULAR TEST: Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 20
TIME = 30mins

DATED: 07-05-2019

Q1. A 30 year old man came to emergency department with high grade fever (102° F), cough and pain on swallowing. On examination, he has large & swollen tonsils (inflammation of tonsils). Complete blood picture was ordered immediately. (1+4)

I. Which type of leucocytes will be increased in this condition?
II. Classify WBC's. Give one function of each type of cell?

Q2. A) Define inflammation? Explain in detail the different lines of defense in inflammation. (3+2)

B) Describe in detail the bilirubin cycle?

Q3. A) Enumerate the different stages of Erythropoisis? (2.5+2.5)

B) Explain the mechanism of regulation of red blood cell production?

Q4. A) Define anemia. Classify the different types of anemia? (1+2+2)

B) Explain in detail the complete blood picture in case of iron deficiency anemia?

AZRA NAHEED MEDICAL COLLEGE
ANATOMY DEPARTMENT
3rd module ist yearMBBS

TOTAL MARKS 50

SEQ

Qno1 a) Draw & label histological picture of spleen (5)

b)Define neurilation (1.5)

C) Give the structure and functions of placenta (3.5)

Qno2 a)Enlist the ligaments and bursae of knee joint , give anatomical basis of locking and unlocking mechanism of knee joint ?(4+3)

b) what is unhappy triad ?(2)

c)what is amelia? (1)

Qno3 A35 years old female presented in OPD with complain of femoral hernia , Give the boundaries and content of femoral triangle ? why femoral nerve is outside the femoral sheath ? give the boundaries of femoral ring also tell which ligament is torn in case of strangulation of femoral hernia ?(2.5+2.5+1+3+1)

Q-4 a) A patient with history of road side accident is presented to surgical emergency with complain of inability to dorsiflex his right foot . with the help of your knowledge justify the anatomical basis of foot drop ? (5)

b)Draw &label cutaneous nerve supply of lower limb ? (5)

Qno 5 a) what are varicose veins ? give origin course and termination of great saphenous vein ?(1+3)

b) give the root value of sciatic nerve also give its course ,relation and branches of sciatic nerve (3)

c) give origin insertion and nerve supply of evertors of foot (3)

ZRA NAHEED
AL COLLEGE
LAHORE

5

YEAR MBBS 2011-16
(Physiology)

SSIONAL TEST: SENSORY SYSTEM

MULTIPL
S.
all q
Total Marks

ESTIONS (MCQS)
est answer,
y equal marks.
Dated: 03-04-14

1-All objective questi
the invigilator within
2-Any cutting and over

TIONS
rked on the paper and returned to
tive part will not be accepted.

ceptors are involved in detecting:

ges in blood pressure.
ges in tension and stretch in muscles and
ges in temperature in the skin.
e of the above.

arding the sensory homunculus
ents the "relative" amount of sensory
mation sent to the brain by various body parts
rent body parts are not represented according
eir size but according to their sensory
ion
nk, thigh and limbs occupy smaller area
ers, jaw, lips and tongue have greater
esentation.
e of the above

5,7

atosensory association area is Brodmann's
a

5, 7 5, 7

as 5 & 7
as 22
as 8
as 3, 1, 2
as 44

Q6. Migraine h
prodromal symp
visual aura, or ot
of the following is
prodromes?

ypically begin with a
n as nausea, loss of vision,
sory hallucinations. Which
ht to be the cause of such

A. Increased blood to brain tissue in the visual
or other sensory ex
B. Selective loss of BA neurons in the various
sensory areas of rtex
C. Constipation
D. Vasospasm leading to ischemia and disruption of neuronal activity in the relevant sensory areas of cortex
E. Excessive sleep and relative inactivity

Q7. Iggo dome receptors are multiple no: of merkel's disk connected to a single long myelinated fiber, it carries the following sensations:

A. Pain
B. Touch
C. Pressure
D. Temperature
E. Vibration

Touch

Q8. Which of the following is an important functional parameter of pain receptors?

A. Exhibit little or no adaptation
B. Are not affected by muscle tension
C. Signal only flexion at joint capsules
D. Can be inhibited voluntarily
E. Give rise to signals that rarely, if ever, convey the location of tissue ischemia

harp pain is transmitted by

lpha fibers
ype nerve fibers
delta fibers
beta nerve fibers
B and C

Q9. When the nerve cell becomes permeable to sodium, the charge changes to _____. This is called _____.

-55

A. -55 mV, depolarization
B. +55 mV, hyperpolarization
C. +70 mV, hyperpolarization
D. -70 mV, repolarization
E. -65 mV, hyperpolarization

llowing are the inhibitory neurotransmitters:

lutamate, GABA
erotonin, dopamine
GABA, glutamate
orepinephrine, glycine
one of the above

Serotonin
dopamine

Q10. The primary somatic sensory cortex is located in the:

A. Angular gyrus
B. Cingulated gyrus
C. Precentral gyrus
D. Postcentral gyrus
E. None of the above

Primary Somatosensory Cortex

Date: 25-04-2014

Azra Naheed Medical College, Lahore

1st Year MBBS

Time: 45 Minutes

Marks: 40

Class Test on Enzymes

Attempt all Questions

Question: 1

(a) Tabulate sequence wise the six main classes of enzymes with two examples from each class. (3)

(b) What are competitive, non competitive enzyme inhibitions? Sketch the Michaelis Menten and Lineweayer –Burke (double reciprocal) plots in the presence and absence of competitive inhibitor, clearly indicating how you could determine Km and Vmax. (4)

Question: 2

(a) What are enzymes, coenzymes and cofactors name the vitamins present in the following coenzymes, NAD, FAD, TPP and coenzyme A respectively? (4)

(b) Explain with examples covalent modification of enzymes activity. (3)

Question: 3

What is the importance of serum enzymes in diagnosis of various diseases? Explain your answer with examples. (6)

Question: 4

(a) What are isoenzymes, give isomeric forms of LDH and CK? (3)

(b) What are zymogens (proenzyme) explain your answer with three examples. (3)

Question: 5

What is the affect of substrate concentration, pH, temperature and enzyme concentration on enzyme catalyzed reactions? (5)

Question: 6

Write short notes on following

(a) Enzymes as medicine (4 ½)

(b) Allosteric regulation of enzyme activity (4 ½)

4-"Tandem pore domain" are what type of channels?

A. Voltage gated potassium channels

B. Voltage gated sodium channels

C. Sodium leaky channels

D. Potassium leaky channels

E. Voltage gated Calcium channels

D

Dt: 15-02-2011 Azra Naheed Medical College, Lahore

1st Year MBBS

Class Test on Carbohydrates Time: 45 minutes Marks: 10

Attempt all Questions

Question: 1

(a) Define and classify carbohydrates with two examples from each class (4)

(b) What is optical isomerism? Pg no 19 Faiq (3)

Question: 2

(a) Write a short note on mutarotation. Pg no 19 Faiq (4)

(b) Draw Fisher and Howarth structure of glucose. (2)

Question: 3

(a) Describe D and L isomerism, epimersim and anomersim. 53 H (5)

(b) Why hydrolysis of sucrose is called inversion? Pg 14 Faiq (2)

Question: 4

(a) What are oxidation products of glucose under various conditions? (3)

(b) Name the reduction products of glucose, galactose, mannose and fructose. (4)

Question: 5

(a) What is cellulose? Give its biological importance. Explain why starch can be digested by humans but not cellulose (Pg no 16 Faiq, Hashmi Page 60) (3)
→ Hashmi Pg no 59

(b) Give structure and functions of starch and glycogen. → Pg 15 Faiq (4)

Question: 6

(a) What are heteropolysaccharides, give composition occurrence and functions of hyaluronic acid ✓ Pg 16 Faiq. (3)
→ Hashmi 53

(b) A 30 years old male visited the physician complaining of bloating & diarrhea. He told that he had previous such episodes after ingestion of milk and milk products.

i. What clinical disorder do you suspect? (3)

ii. What is the cause of this disorder?

iii. How these episodes can be prevented?

MEDICAL
LEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology
INSTRUCTIONS
Dated: 11

MULTIPLE CHOICE QUESTIONS
Total Marks 20
Select Single best answer, all qu
carry equal marks.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the cont... body ...

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid c... heme formation
C. Has enzymes for oxidative phosph...
D. Generates ATP
E. All of the above

RA NAHEED
ICAL COLLEGE
LAHORE
Department of Physiology
1ST YEAR MBBS 2013-14
m Test: CIRCULATORY SYSTEM

Which of the following increases the plateau level of cardiac output curve?
A. Myocarditis
B. Cardiac tamponade
C. Myocardial infarction
D. Mitral stenosis
E. Decreased parasympathetic stimulation of heart

Total peripheral resistance increases in which of the following?
A. Anemia
B. Exercise
C. Sympathetic stimulation
D. Arteriovenous fistula
E. None of the above

Regarding systemic vascular resistance, choose the best statement?
A. Is less than the pulmonary vascular resistance
B. Directly proportional to the blood flow of an organ
C. Is inversely proportional to the viscosity of blood
D. Mainly effects the diastolic blood pressure
E. Is not effected by the sympathetic stimulation

Which of the following would be expected to occur during central nervous system ischemic response?
A. Decreased heart rate
B. Increased parasympathetic stimulation
C. Decreased total peripheral resistance
D. Enhanced sympathetic stimulation and generalized vasoconstriction
E. Decreased arterial blood pressure

n which of the following conditions there will be decreased cardiac output?
.. Hyperthyroidism
. Beriberi
. Atrioventricular fistula
. Anemia
. Acute myocardial infarction

MULTIPLE CHOICE QUESTIONS
(MCQS) Total Marks 20, Time = 20mins
Select Single best answer, all questions carry equal marks.
ROLL #:_____ DATE: 14-05-14

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2-Any cutting and overwriting in objective ques will not be accepted.

6. Right ventricular failure leads to:
A. Pulmonary edema
B. Reduced systemic arterial pressure
C. Decreased concentration of plasma in the blood
D. Edema of feet
E. Edema of face

7. Which of the following does not cause hypo effective heart?
A. Inhibition of sympathetic nervous excitation of heart
B. Coronary artery blockage
C. Valvular heart disease
D. Cardiac hypoxia
E. Sympathetic stimulation

8. Which is not true regarding second heart sound?
A. Duration of second heart sound is about 0.11 second
B. Vibration produced by sudden closure of semilunar valves
C. Dub is indicative for second heart sound
D. Second heart sound duration is more than first heart sound
E. Audible with the stethoscope

Mean arterial Pressure is?
A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic blood pressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

10. Which of the following structures are not innervated?
A. Arterioles
B. Post capillary venules
C. Venuoles
D. Pre-capillary sphincters

37- **A 15 year old boy suffered from head trauma compressing the underlying brain tissue. Which of the following blood pressure regulating mechanism occurs in response to an increased intracranial pressure (CNS ischemic response)?**
A. Blood pressure and heart rate increase
B. Blood pressure and heart rate decrease
C. Blood pressure increases and heart rate decreases
D. Blood pressure decreases and heart rate increases
E. Blood pressure and heart rate remain constant

38- **All of the following will increase venous return except**
A. Negative Right Atrial pressure
B. Exercise
C. Increased force of contraction of heart
D. Gravity
E. Healthy venous pump

39- **Which of the following part of circulatory system has the greatest cross- sectional area?**
A. Aorta
B. Arteries
C. Veins
D. Venules
E. Capillaries

40- **When a person stands from its supine position, his/her heart rate is increased. Which of the following accounts for increase in heart rate upon standing?**
A. Decreased total peripheral resistance
B. Increased vasoconstriction
C. Increased after load on heart
D. Increased preload on the heart
E. Decreased venous return

41- **Release of which of the following substance cause vasodilatjon and increase the permeability of the capillaries during anaphylactic shock?**
A. Nitric oxide
B. Histamine
C. Adenosine
D. Carbondioxide
E. Atrial natriuretic peptide (ANP)

42- **A 40 year old male was brought to the emergency department unconscious with history of Road Traffic Accident (RTA) 1 hour earlier. He lost a lot of blood due to fracture of both legs. On examination he had a very feeble pulse & his systolic blood pressure was found to be 30mmHg and diastolic blood pressure was not recordable. Which of the following blood pressure regulating mechanism will be activated in this condition?**
A. Aortic baroreceptors
B. Carotid baroreceptors
C. CNS ischemic response
D. Carotid chemoreceptors
E. Aortic chemoreceptors

43- **During exercise total peripheral resistance decreases because of the effect of**
A. The sympathetic nervous system on skeletal muscle arterioles
B. The parasympathetic nervous system on skeletal muscle arterioles
C. Local metabolites on skeletal muscle arterioles
D. Histamine on skeletal muscle arterioles
E. Both parasympathetic & local metabolites on skeletal muscles

44- **Which of the following will cause decrease in blood flow in a vessel?**
A. Increase in the radius of the vessel
B. Decreased resistance of the vessel
C. Increased pressure gradient across the vessel
D. Increased viscosity of blood
E. Decreased viscosity of blood

45- **The compensatory mechanisms in non-progressive shock include all of the following except:**
A. Arteriolar constriction
B. Increased heart rate
C. Sympathetic over activity
D. Sludging of small blood vessels
E. Increased level of argiotensin 2

46- **A 70 Kg man has a heart rate of 70beats/min. His End diastolic volume is 120ml & End systolic volume is 50ml. What will be his cardiac output?**
A. 5000ml
B. 4900ml
C. 4000ml
D. 5200ml
E. Cardiac output cannot be calculated

47- **A 37 year old female was brought to the emergency department in shock. Which of the following is the reason to direct treatment toward septic shock rather than hypovolemic shock?**
A. Cardiac output is higher than normal
B. Ventricular contractility is greater than normal
C. Total peripheral resistance is greater than normal
D. Heart rate is greater than normal
E. Both of them have the same line of treatment

48- **Mean arterial Pressure is?**
A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic bloodpressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

49- **A 50 year old man with 20 year of past history of hypertension has been diagnosed as the case of left ventricular failure. Which of the following will be the important clinical finding in this patient?**
A. Edema around the eyes
B. Edema in the feet
C. Pulmonary edema
D. Pulsating liver
E. Ascites (abdominal edema)

1.

50- **The 2nd heart sound is louder than the first heart sound because?**
A. More pressures are involved
B. Cusps of the semilunar valves are tougher than the Av valves
C. Semilunar valve is snapped closed without the aid of papillary muscles
D. Due to regurgitation of blood in aorta
E. Elastic recoil of aorta

ANATOMY DEPARTMENT

AZRA NAHEED MEDICAL COLLEGE, LAHORE

Total time:120mins

Total Marks:50

Cardiovascular Module

1st year MBBS

Short Essay Questions (SEQs)

Date 29-7-19

QNO1 a)Give the development of heart tube ?(2)

b)how interatrial septum is formed ?(1.5)

c) give different types of ASD?(1.5)

QNO2 a) give an account of development of aortic arches (3)

b) a five year old baby boy was brought to pediatric OPD for checkup on being turning blue on exertion and crying.

a)Write down the probable diagnosis. 0.5

b) write the origin of this embryological defect. 0.5

c) write the classical features of this embryological defect. 1.5

QNO3 In tabulated form give histological differences of artey and vein ?(5)

Qno4 Draw & label histological diagram of elastic artery (5)

QNO5 What is azygous venous system ? give the origin ,course and termination of azygous vein ?(1+4)

Qno 6 a)Draw& label transverse section of Superior mediastinum (3)

b) enumerate the clinical features resulting from mediastinal tumor (2)

Qno7 What is cardiac tamponade ? give the anatomy of pericardium (1+4)

QNO8 A 55 years old male presented in medical emergency with complaint of tachypnea, tachycardia and sever chest pain . on investigation , myocardial infarction is diagnosed

a) which artery will be involved in anterior wall myocardial infarction ?(0.5)

b) this artery is branch of which coronary artery ?(0.5)

c) give the blood supply of heart?(3)

d) what is cardiac dominance ?(1)

Qno9 give the boundaries and contents of posterior mediastinum (5)

Qno10 a) enlist the openings of Right atrium (2)

b) Give the neve supply of heart ?(3)

20-Contribution of Na+ - K+ pump in attaining RMP is

A. -94mV

B. +61mV

C. -4mV

D. -61mV

E. +94mV

11- Regarding T tubules which of the following statement is correct

A. Contain a voltage- sensitive protein called ryanodine receptor.
B. Are located at the H- zone
C. Forms dyad with the tubule of sarcoplasmic reticulum in skeletal muscles
D. Opens to the extracellular space and carries the depolarization to the interior of the cell
E. Two T tubules and the terminal cisternae of the sarcoplasmic reticulum forms a triad arrangement.

D

THE SUPERIOR COLLEGE, LAHORE

1st PROFESSIONAL MBBS

ANNUAL EXAMINATION 201

ANATOMY

(SEQ's)

Roll No. 117

Time Allowed: 2 hours

Total Marks: 45

Instructions

1. The SEQ's part is to be submitted within 2 hours. Extra time will not be given.
2. Neat Hand Writing use of margin and marker for headlines will increase the presentation of your paper.
3. Do not write your name or disclose your identity in anyway.

90 | 65

27 + 38

Q1. A 60 years old man presented in emergency department with complaint of breathlessness, on chest X ray pleural effusion is diagnosed.

a) What are pleural recesses? (2)

b) Which border of rib is preferred during aspiration of pleural effusion, justify your answer? (1)

c) What is the nerve supply of pleura? (2)

Q2. a) Define synovial joint. Give one example each of a typical and atypical synovial joint? (1)

b) Enlist characteristics of a synovial joint? (4)

Q3. Draw & label light microscopic feature of serous and mucous acini? (4)

b) What is a serous demilune (1)

Q4. A patient is brought to emergency following fracture of humeral shaft in the middle

a) Name neurovascular structure that might be involved in such a fracture. (1)

b) Give an account of course and distribution of nerve that might be involved in this fracture? (3)

c) Name the clinical condition resulting from involvement of nerve in this area (1)

Q5. A patient with carpal tunnel syndrome reports to her doctor

a) Explain the anatomical basis of carpal tunnel syndrome (2)

b) Which nerve is most likely to be involved in this case? (1)

c) Give an account of distribution of this nerve in hand (2)

LOAF

Q6.

a) Describe the formation and contents of femoral sheath (3)

b) Enlist boundaries of femoral ring (1)

c) What is femoral hernia explain why is it more common in female (1)

Q7:- What is a typical intercostal space enlist its contents? Draw a labelled diagram to show the formation of typical spinal nerve (1+4)

Q8. Give the origin, course, branches and distribution of left coronary artery; Explain the right and left dominance pattern of coronary circulation. (0.25+0.5+1.25+1+2)

Q9. A 50 years old female came to medical OPD with lurching gait,

a) what test should be done to check the muscles involved, (1)

b) explain the reason of lurching gait with your anatomical knowledge. (2)

c) Give the muscles involved and nerve supply? (1+1)

c. 5 digits

c. Metatarsus and

Fig. 1.1: Parts and 32 bo

Introduction

THE UPPER LIMB

n seen that the upper limb is made up
(1) Shoulder region, (2) arm or brachiu
n or antebrachium; and (4) hand or mani
bdivisions of these parts are given in Ta
g. 1.1.
ilder region includes
sternal or breast region on the front of the c
nulla or armpit; and
capular region on the back comprising
nd the scapula.

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1ST YEAR MBBS 2017-18

TERM TEST: Cell Membrane & Blood Physiology

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 12-02-2018

MARKS= 45
TIME = 1 hour 45min

Q1.A) Define hemostasis and enlist the main steps involved in hemostasis? (2.5)
B) A 14 year old boy was brought to the emergency department with severe abdominal pain. An acute appendicitis was diagnosed and immediate surgery was advised. (1+1.5)
I. Which clotting mechanism will be involved in blood coagulation during & after surgery?
II. Give the pathway of this clotting mechanism in cascade form? (3)

Q2.A) Enlist the transfusion reaction in case of mismatch blood transfusion? (2)
B) What disturbances may be present in the newborn suffering from erythroblastosis fetalis? (2.5 + 2.5)

Q3.A) Give an account of role of Helper T cells in Active immunity?
B) Draw structure of antibody and enlist the methods of killing of bacteria by the antibodies? (3+2)

Q4. A) Define inflammation? Explain in detail the responses of different WBCs during inflammation?
B) Enumerate the components of "monocyte macrophage system"? What does the macrophages in the liver sinusoids called Which type of immunity is provided by this system?

Q5. A 30 year old man came to emergency department with high grade fever (102° F), cough and pain on swallowing. On examination, he has large & swollen tonsils (inflammation of tonsils). Complete blood picture was ordered immediately. (1+4)
I. *Which type of leucocytes will be increased in this condition?*
II. *Classify WBC's. Give one function of each type of cell?* (2.5+2.5)

Q6. A) Enumerate the different stages of Erythropoisis?
B) Explain the mechanism of regulation of red blood cell production? (1+2

Q7. A) Define anemia. Classify the different types of anemia?
B) Explain in detail the complete blood picture in case of iron deficiency anemia? (2.5

Q8. A) Define "Homeostasis"? What are the different parameters to maintain homeostasis in the body?
B) Explain positive feedback mechanism with the help of an example?

Q9. Define the following:
I. Polycythemia Vera
II. Thrombocytopenia
III. Hemophilia
IV. Heparin
V. Gene expression

45
45
10

buffers of the blood
ising greatly (and the
terial blood has a pH
res CO_2 in the tissue
alue of about 7.37. In
unit takes place. The
from the blood in the
rial value of 7.41 once
ditions of high meta-
through the tissues is
ssue blood (and in the
s 0.50, about 12 times
ue acidosis.

E RATIO

oted that normal trans-
issues by each 100 mil-
liters, whereas normal
to the lungs is about 4
litions, only

in blood
Jensen FB: Red blood cell pH, the Bohr effect, and other oxygenation-linked phenomena in blood O_2 and CO_2 transport. Acta Physiol Scand 182:215, 2004.
Jensen FB: The dual roles of red blood cells in tissue oxygen delivery: oxygen carriers and regulators of local blood flow. J Exp Biol 212:3387, 2009.
Piiper J: Perfusion, diffusion and their heterogeneities limiti
tissue O_2 transfer in muscle. Acta Physiol Scand 168:60
Richardson RS: Oxygen transport and utilization: an integ
the muscle systems. Adv Physiol Educ 27:183, 2003.
Tsai AG, Johnson PC, Intaglietta M: Oxygen gradients in t
circulation. Physiol Rev 83:933, 2003.

PO_2

Alveolar air = 104mmHg.
Arterial end (Normal) = 95mmHg.
I.F = 40mmHg.
Interst. cells = 23mmHg.
Venous blood = 40mmHg
Capillary = 40mmHg

PCO_2

Int. cell = 46mmHg.
Int. fluid = 45mmHg.
Arterial end = 40mmHg.
capillary = 45mmHg.
alveolar air = 40mmHg.

Date: 25-04-2014

Azra Naheed Medical College, Lahore

1st Year MBBS

Time: 45 Minutes

Marks: 40

Class Test on Enzymes

Attempt all Questions

Question: 1

(a) Tabulate sequence wise the six main classes of enzymes with two examples from each class. (3)

(b) What are cofnpetitive, non competitive enzyme inhibitions? Sketch the Michaelis Menten and Lineweaver –Burke (double reciprocal) plots in the presence and absence of competitive inhibitor, clearly indicating how you could determine Km and Vmax. (4)

Question: 2

(a) What are enzymes, coenzymes and cofactors name the vitamins present in the following coenzymes, NAD, FAD, TPP and coenzyme A respectively? (4)

(b) Explain with examples covalent modification of enzymes activity. (3)

Question: 3

What is the importance of serum enzymes in diagnosis of various diseases? Explain your answer with examples. (6)

Question: 4

(a) What are isoenzymes, give isomeric forms of LDH and CK? (3)

(b) What are zymogens (proenzyme) explain your answer with three examples. (3)

Question: 5

What is the affect of substrate concentration, pH, temperature and enzyme concentration on enzyme catalyzed reactions? (5)

Question: 6

Write short notes on following

(a) Enzymes as medicine (4 ½)

(b) Allosteric regulation of enzyme activity (4 ½)

(5)

Q3. A) Enumerate the different stages of Erythropoiesis? (2.5+2.5)

B) Explain the mechanism of regulation of red blood cell production?

Q4. A) Define anemia. Classify the different types of anemia? (3+2)

B) Describe in detail the different steps of Hemoglobin synthesis

Q5. A) A 50 year old man presents to his family Physician with complain of shortness of breath on mild exertion. He has a very pale complexion and gives a history of consuming alcohol. His lab reports show picture of hypochromic microcytic anemia and abdominal ultrasound shows fibrotic changes in liver due to excessive alcohol consumption. What is the probable cause of anemia in this case?

B)What is the daily requirement of iron in the body? Describe in detail the mechanism of iron absorption, transport and utilization in the body? (5)

Q6. Define the following: (1+1+1+2)

i. HbS

ii. Osmolality

iii. Polycythemia

iv. Differentiate between primary & secondary active transport

AZRA NAHEED MEDICAL COLLEGE
DEPARTMENT OF BIOCHEMISTRY

Zubair Rashid
Roll 143

MID YEAR EXAM - 2019
FIRST YEAR MBBS PART I – SEQs

Total marks:	**70**
Time Allowed:	**2½ Hours**

Q No. 1.
a. Enlist heteropolysaccharides? Mention composition, occurrence and importance of hyaluronic acid and Heparin. (5)
b. Draw the Fischer's and Haworth's formula for glucose. (5)

Q No. 2
a. What is Anomerism? (5)
b. Briefly describe the epimers of D-glucose. (5)

Q No. 3
a. Enlist body buffers and give their importance. (5)
b. What is Acidosis and Alkalosis? What is the range of pH compatible with life? (5)

Q No. 4
a. What is the primary structure of proteins? What are the characteristics of a peptide bond? (5)
b. What is isoelectric precipitation of proteins? (5)

Q No. 5
a. Briefly describe the decarboxylation reaction of amino acids and formation of important amines. (5)
b. Write down the derivatives of tyrosine, ~~histamine~~ histidine and arginine. (5)

Q No. 6
a. What are polyunsaturated fatty acids and give their importance. Mention the number and sites of unsaturation. (5)
b. What are lung surfactants? Give their clinical importance. (5)

Q No. 7
a. Write down the functions of phospholipids. (5)
b. What are primary and secondary bile acids? Briefly describe enterohepatic circulation of bile acids. (5)

ANNUAL EXAMINATION 2014

BIOCHEMISTRY

SEQ.S

TIME: 2:00 HOURS

TOTAL MARKS: 35

Instructions

1. All SEQ's are to be attempted on the paper and returned to the invigilator within 2:15 HOURS after you have received the question paper.
2. Any cuttings or overwriting in answering the objective part will not be accepted and no marks will be given even if the answer is correct.
3. Write your Roll No. only on the perforated portion of the title page.
4. Do not write your name or disclose your identity in anyway.

Question: 1

(a) What are colloidal solutions? Give properties of colloidal solutions (3)

(b) Draw and describe fluid mosaic model of cell membrane (2)

Question: 2

(a) Enumerate different types of isomerism in monosaccharides with examples. (3)

(b) Give reduction products of glucose, mannose, galactose & fructose. (2)
Sorbitol, Mannitol, Dulcitol, Mannitol + Sorbitol.

Question: 3

(a) Enumerate plasma proteins, what are the functions of albumin? (3)

(b) What are essential amino acid and why these are called essential? Give two examples of neutral, acidic and basic amino acids respectively. (2)

Question: 4

(a) Differentiate between glycerophospholipids and sphingophospholipids. What is the biological significance of lecithin and gangliosides? (3)

(b) What are eicosanoids? Give the name of their precursors. Enumerate functions of prostaglandins and thromboxanes. (2)

Question: 5

(a) Write down the sources, physiological functions and deficiency symptoms of ascorbic acid. (3)

(b) Discuss the role of enzymes as medicine. (2)

Question: 6

(a) What are the different types of enzymes inhibitions explain with examples? (3)

(b) Explain lock & key model and induce fit model with reference to their mode of action. (2)

Question: 7

(a) Give an account of post transcriptional modification of tRNA. (3)

(b) Mention the functions of nucleotides. (2)

AZRA NAHEED MEDICAL COLLEGE LAHORE

MBBS 2012-17 (Physiology)

First test; Cell and membrane Physiology

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer, all questions carry equal marks.

Dated: 11/02/2013

INSTRUCTIONS

1. All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2. Any cutting and overwriting in objective part will not be accepted.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:

A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the control systems of the body act by:

A. Feed forward mechanism
B. Adaptive feedback mechanism
C. Positive feedback mechanism
D. Neutral feedback mechanism
E. Negative feedback mechanism

Q3. Gain of a control system is:

A. Correction multiplied by error
B. Correction divided by error
C. Error/correction
D. Is less if correction is more
E. Is more if error is more

Q4. Entire outside surface of the cell has a loose carbohydrate coat called:

A. Cell membrane
B. Cell wall
C. Glycocalyx
D. Glycoproteins
E. Peripheral space

Q5. The organelle of the cell that synthesizes the fatty substances including steroid hormones is

A. Golgi apparatus
B. Nucleus
C. Ribosome
D. Smooth endoplasmic reticulum

Q6. The human cell mitochondria is a

A. membrane organelle
B. Contains enzymes for citric acid cycle and heme formation
C. Has enzymes for oxidative phosphorylation
D. Generates ATP
E. All of the above

Q7. Synthesis of carbohydrates like chondroitin sulphate and hyaluronic acid is the function of

A. RER
B. SER
C. Golgi apparatus
D. Peroxisomes
E. Lysosomes

Q8. The substrate for common pathway of glucose, amino acid and fatty acid metabolism in mitochondria is:

A. Acetyl CoA
B. Succinyl CoA.
C. Lactic acid.
D. Pyruvic acid.
E. Citric acid

Q9. All of following have limiting membrane EXCEPT

A. Golgi apparatus
B. Endoplasmic reticulum
C. Nucleus
D. Lysosomes
E. Nucleolus

Q10. Which of the following organelle is responsible for autolysis of dead cells?

A. Lysosomes
B. Rough endoplasmic reticulum
C. Peroxisomes
D. Secretory vesicles
E. Golgi apparatus

Q11. A 6 year old girl is suffering from

10-Regarding chronaxie which of the following statement is correct

A. It is the minimum strength of stimulus which can excite the tissue
B. It basically unit of time which measures the excitability of the tissue
C. Chronaxie is shortened by cold temperature
D. Chronaxie is shortened in the paralyzed muscle compare to the normal muscle
E. It is gradually shortened in the neural diseases

B

NAHEED MEDICAL
COLLEGE LAHORE
MBBS 2013-14 (Physiology)
SYSTEM TEST
BLOOD PHYSIOLOGY - 1

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks: 20
Select Single best answer.
All questions carry equal marks.
Dated: 17-04-2014

INSTRUCTIONS:
1. All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.
2. Any cutting and overwriting in objective part will not be accepted.

Q1. Inflammation is acute response of the tissue to injury. Which of the following plasma proteins is responsible for "walling off" effect of inflammation?

A. Prothrombin
B. Albumin
C. Fibrinogen
D. γ Globulin
E. α Globulin

Q2. Serum differs from plasma in lacking:

A. Albumin
B. Fibrinogen
C. Globulin
D. Ferritin
E. Apoferritin

Q3. Which are the most abundant of all the cells of the blood?

A. Lymphocytes
B. Neutrophils
C. Monocytes
D. Platelets
E. Red blood cells

Q4. The following cell is devoid of the hemoglobin:

A. Erythrocyte
B. Reticulocyte
C. Intermediate normoblast
D. Late normoblast
E. Pronormoblast

Q5. Maturation of erythroblasts involves:

A. Increase in size of cell
B. Condensation of chromosomes in nucleus
C. Accumulation of hemoglobin
D. Pyknosis of nucleus
E. Breakage of cell membrane

Q6. The oxygen and carbon dioxide exchange in RBC's is maximum with the following configuration of red cell:

A. Spherical
B. Oval
C. Triangular
D. Rectangular
E. Biconcave

Q7. In an adult human the red cells are formed continuously in the bone marrow of the:

A. Sesamoid bones
B. Shafts of long bones
C. Lower ends of the long bones
D. Membranous bones
E. Phalangeal bones

Q8. Fe in the liver parenchymal cells is stored in the form of:

A. Apoferritin
B. Transferrin
C. Hemosiderine
D. Ferritin
E. Hemochromatin

Q9. The protein responsible for iron transport in plasma is:

A. α 1-anti trypsin
B. Ferritin
C. Apo-transferrin
D. Apo-ferritin
E. Ceruloplasmin

Q10. The erythropoietin level in the blood of the following will be high:

A. Olympic marathon runner
B. End stage renal disease
C. Polycythemia vera
D. Aplastic anemia
E. Leukemia

C. only ...
D. Contractio... dependent.
F. The rate of cross br... muscle is approximately ... in skeletal muscle.

NAHEED MEDICAL COLLEGE
MBBS 2015-16 (Physiology)
SYSTEM TEST: HEART PHYSIOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks: 20
Select Single best answer,
All questions carry equal marks.
Dated: 09-05-2016

INSTRUCTIONS:
1. All objective questions are to be attempted on the paper and returned to the invigilator within 20 mins.

Q1. Propegation of action potential is the fastest in which of the following myocardial conducting tissue:
A. Internodal pathway
B. Atrioventricular bundle
C. Purkunjie fibers
D. Ventricular muscle
E. Bundle of His

Q2. A 70 year old Hamid was brought to emergency with history of sudden faintness.On examination,his pulse rate is 40 /minute and became conscious after an hour with normal BP and heart rate. ECG changes recorded during faintness are75 P waves per minute and 35 QRS waves per minute, with a normal QRS width. Which of the following is the most likely diagnosis?
A. First degree atrio ventricular block
B. Stokes Adams syndrome
C. Atrial paroxysmal tachycardia
D. A,B and C are true
E. Atrial premature contractions

Q3. Which of the following type of ionic channels are responsible for the plateu in ventricular muscles of heart?
A. Fast calcium channels
B. Sodium leak channels
C. Voltage gated sodium channels
D. Voltage gated calcium channels
E. Voltage gated potassium channels

Q4. Which of the following is the cause of AV-nodal delay
A. Presence of large sized muscular fibers
B. Diminished number of gap junctions in AV nodal fibers
C. Opening of potassium channels
D. Lack of slow Ca++ Na++ channels
E. All of the above

Q5. Below is the ECG record of a person who died after this record.Diagnose the arrhythmia?

A. Atrial fibrillation
B. Atrial flutter
C. Ventricular fibrillation
D. Complete heart block
E. Sinus arrythmia

Q6. The heart rate increase (tachycardia) occurs in which of the following conditions
A. Fever
B. Anemia
C. Hyperthyroidism
D. Sleep
E. A,B and C are true.

Q7. The best index of left ventricular function on echocardiography is:
A. Central venous pressure
B. Ejection fraction
C. Stroke volume
D. Pulmonary capillary wedge pressure
E. Holter monitor

Q8. This increased contractility of heart in response to increased volume of inflowing adapt to inflowing blood is called
A. Frank starling law
B. Ohms law
C. Mareys law
D. All or none law
E. Einthoven's law

Q9. A 4 years old child was brought to the physician .Mother gives history of excessive breathlessness during and after exercise. During auscultation a Machinery murmur which is present both in systole and diastole is heard over the left sternal border. X-ray chest shows boot shaped heart .Following is the most likely diagnosis
A. Aortic Stenosis
B. Aortic Regurgitation
C. Patent ductus atriosus
D. Pericardial effusion
E. All of the above

Q 10. Regarding ECG changes in acute myocardial infarction , choose the best statement
A. PR-interval is prolonged.
B. No change occurs in ST-segment
C. P-Wave is absent.
D. ST-segment elevation and T- wave inversion
E. Narrowing of QRS complex

143 Zaheer

AZRA NAHEED MEDICAL
DEPARTMENT OF BIOCH

ASSESSMENT THIRD MODULE
CLASS TEST. 1st Year MBBS

Total marks: 70
Time Allowed: 2 HOURS

Q No. 1.

a. Define and classify lipids with one example form each class. What is the biological importance of fats? (6)
b. What are polyunsaturated fatty acids (PUFA)? Why these are called essential fatty acids? (6)

Q No. 2

a. What is the difference between cephalin and Plasmalogen? Give biological role of both the lipids. (6)
b. What is respiratory distress syndrome? Give its reason and consequences. (6)

Q No. 3

a. Name ketone bodies, mention site of synthesis. Why liver is unable to utilize ketone bodies for energy purpose? (5)
b. What is rancidity of fat? How it can be prevented? (5)

Q No. 4

a. What are lipoproteins? Classify on the basis of density. Write down the site of synthesis, functions and composition of chylomicrons. (6)
b. What are gangliosides? Give composition and biological importance of gangliosides. (6)

Q No. 5

a. Name the precursors of eicosanoids, mentions cyclic and non-cyclic eicosanoids. What is the biological importance of prostaglandins, thromboxanes and leukotrienes. (6)
b. Write down chemical properties of unsaturated fatty acids. (6)

Q No. 6

a. What are steroids? Give biological importance of cholesterol. (6)
b. What are bile acids? Name primary and secondary bile acids with their sites of synthesis. Mention the physiological functions of bile acids. (6)

→ Solubility decrease with increase of chain length.

→ More carbon more melting point. In case of saturated fatty acid.

15 Which of the following is a water soluble fatty acid?
(a) Arachidonic acid
(b) Linoleic acid
(c) Stearic acid
(d) Butyric acid

→ Greater the chain length lesser will be the solubility

16 Which of the following fatty acid has 16 carbon chain?
(a) Palmitic acid
(b) Stearic acid
(c) Oleic acid
(d) Linolinic acid

17 Which of the following is an essential fatty acid?
(a) Palmitoleic acid
(b) Oleic acid
(c) Linolinic acid
(d) Stearic acid

(i) linoleic
(ii) linolenic
(iii) Arachidonic acid

18 Which of the following fatty acids will have least melting point?
(a) Linolinic acid
(b) Arachidonic acid
(c) Linoleic acid
(d) Oleic acid

→ Melting point increase with increase of chain length

19 Which of the following compounds is not formed from cholesterol?
(a) Bile pigments
(b) Bile salts
(c) Vitamin D
(d) Cortisol

20 Which of the following eicosanoid is platelet aggregator and vasoconstrictor?
(a) Prostacyclin
(b) Prostaglandin A
(c) Thromboxane
(d) Prostaglandin E

→ opposite to thromboxane

21 When one fatty acid from 2 position of lecithin is removed by phospholipase A2, the remaining part is known as:
(a) Ethanolamine
(b) Phosphoinositol
(c) Plasmalogen
(d) Lysolecithin

→ primary → cholic acid → Chenodeoxycholic acid

22 HDL (High Density Lipoprotein) is rich in
(a) Cholesterol
(b) Triacylglycerol
(c) Cholesterol ester
(d) Protein

formed in liver → LDL 5% ← chylomicrons 8%
40%

23 Which of the following are secondary bile acids?
(a) Cholic acid & Lithocholic acid
(b) Chenodeoxycholic acid & Lithocholic acid
(c) Cholic acid & Chenodeoxycholic acid
(d) Deoxycholic acid & Lithocholic acid

Secondary → Deoxycholic → Lithocholic formed in intestine

24 Rancidity of fat can be prevented by addition of
(a) Lead
(b) Copper
(c) Iron
(d) Vitamin E

→ Tocopherol

25 Gangliosides and cerebrosides are
(a) Glycerophospholipids
(b) Glycosphingolipids
(c) Eicosanoids
(d) Steroids

complex lipids

26 Which of the following is derived lipid?
(a) Isoprenoid
(b) Plasmalogen
(c) Phosphoinositol
(d) Phosphatidyl serine

27 By the action of lipoxygenase on Arachidonic acid, which of the following compounds will be formed?
(a) Lecithin & cephalin
(b) Prostacyclins & thromboxanes
(c) Leukotrienes & lipoxins
(d) Bile acids & bile pigments

lipoxygenase → leukotrienes + Lipoxins

28 Waxes are
(a) Esters of fatty acids with glycerol
(b) Esters of fatty acids with sphingosine
(c) Esters of fatty acids with high molecular weight alcohol
(d) Esters of fatty acids with methyl alcohol

cetyl alcohol

29 Which of the following lipoproteins has highest cholesterol content?
(a) HDL
(b) VLDL
(c) LDL
(d) Chylomicrons

Cyclooxygenase → Prostaglandins + Prostacyclins + Thromboxanes.

Chylomicrons → Highest Triacylglycerol / fat 99%

30 Which of the following glycerophospholipids has ether linkage at carbon no.1
(a) Plasmalogen
(b) Lecithin
(c) Cephalin
(d) Phosphatidyl inositol

→ Plasmalogen and cephalin have same structure

Correct

Plasmalogen contain ether linkage

ANATOMY DEPARTMENT

ALLAMA IQBAL MEDICAL COLLEGE, LAHORE

Musculoskeletal module — Total time: 80min — Total Marks:50

date 15-4-19

1st year MBBS

Short Essay Questions (SEQs)

Attempt all Questions & all Questions carry equal marks

Illustrate your replies with appropriate diagrams, where necessary

QNO1 Describe type, variety and articulation of 1ST Carpometacarpal joint also give brief account about the muscles producing movement on it ?(0.5+0.5+1+3)

QNO2 Draw & label microscopic picture of compact bone ?(5)

QNO3 Brefifly describe the boundaries and contents of axilla ? (5)

QNO4 A patient is presented in medical OPD with the history of midshaft humerus fracture. He was diagnosed as case of wrist drop.what is the anatomical justification of wrist drop ? Give origin, root value, course and distribution of involved structure ?(1+1+1+1+1)

QNO5 Why second week of development is called week of tows ? (5)

QNO6 A 45 years old carpenter presented in OPD with flattening of thenar eminence, which nerve is involved ? which muscles are paralysed ? give anatomical justification of this condition ? patient is suffering from which problem?(1+1.5+1.5+1)

QNO7 45-year-old woman having her yearly physical examination was found to have a hard, painless lump in the upper lateral quadrant of the left breast. On examination a small dimple of skin was noted over the lump and three small, hard discrete nodules could be palpated below the lower border of the pectoralis major muscle. A diagnosis of carcinoma of the left breast was made

a) Enlist the groups of lymph nodes involved in this case. 2
b) Name the structure responsible for the dimpling of the skin in this case.1
c) Enlist the structures which are preserved in radical mastectomy? 2

QNO8 Give the origin, course and branches of the artery which can be palpated in the anatomical snuff box. What are dorsal carpal rete? 0.25+1.25+2+1.5

QNO9 A young boy fell on the ground and fractured medial epicondyle of his right humerus; he did not get any treatment and later developed claw hand deformity

a) Name the nerve which has been injured in this case 0.5
b) Mention the course of this nerve in the forearm and hand 2
c) Explain the anatomical basis for this claw hand deformity 2
d) Mention the sensory area supplied by this nerve 0.5

QNO10 Mention the bony attachments of extensor retinaculum; enlist the contents of six osseofibrous tunnels formed under this structure. 1+3
What is tenosynoviitis 1

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in **Figure**
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Figure 43-9B
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Effect of the Resuscitator and the Tank Respirator on Venous Return. When air is forced into the lungs under positive pressure by a resuscitator, or when the pressure around the patient's body is *reduced* by the tank respirator, the pressure inside the lungs becomes greater than pressure everywhere else in the body. Flow of blood into the chest and heart from the peripheral veins becomes

review. JAMA 290:2301, 2003.
Suki B, Sato S, Parameswaran H, et al: Emphysema and mechanical stress-induced lung remodeling. Physiology (Bethesda) 28:404, 2013.
Tarlo SM, Lemiere C: Occupational asthma. N Engl J Med 370:640, 2014.
Taraseviciene-Stewart L, Voelkel NF: Molecular pathogenesis of emphysema. J Clin Invest 118:394, 2008.
Tuder RM, Petrache I: Pathogenesis of chronic obstructive pulmonary disease. J Clin Invest 122:2749, 2012.

Types of Hypoxia

① Hypoxic hypoxia :- decreased oxygen content in blood. due to ↓pulmonary ventilation, altitude, fibrosis, inadequate oxygenation of blood.
② Anemic hypoxia.
③ Stagnant hypoxia :- abnormality in blood flow (viscosity)
④ Histotoxic Anemia :- Inability of tissues to use O_2.

Effects of hypoxia

- depressed mental condition.
- Comma . Secretion of Erythropoietin from kidney.

AHEED MEDICAL
LEGE LAHORE
BBS 2012-17 (Physiology)

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single b...

AZRA
C

REVI

Q1. As
neuro

GIT

Q1. Which of the following is true regarding myenteric plexus?
A. Is located between ...
B. muscle ...

...UESTIONS (MCQS)

...TIPLE CHOICE QUESTIONS
... 20, Time = 20mins

RA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPERTMENT

1ST YEAR MBBS 2013-14

UNIT TEST: NERVE & MUSCLE PHYSIOLOGY

MULTIPLE CHOICE QUESTIONS (MCQS)

Total Marks 20, Time = 20mins

Select Single best answer, all questions carry equal marks.

ROLL #:_____ DATED: 12-03-14

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator within 30 mins
2-Any cutting and overwriting in objective part will not be accepted.

Q1. Unmyelinated nerve conduction and saltatory conduction differs in that:

A. In unmyelinated nerve conduction energy is not a problem.
B. In unmyelinated nerve conduction velocity is slow.
C. In unmyelinated nerve conduction more energy is required and velocity is slow.
D. In saltatory nerve conduction more energy is required, velocity is slow and less space is utilized
E. None of the above

Q2. Chronaxie is defined as:

A. Double the rheobasic strength of stimulus
B. Minimum time required to excite the fiber when strength of the current used is double the rheobasic strength.
C. Minimum time required to excite the tissue when strength of the current is minimum.
D. Threshold voltage
E. Maximum strength of stimulus.

Q3. Skeletal muscle contraction is terminated by which action?

A. Removal of acetylcholine from the neuromuscular junction.
B. Removal of Calcium from the terminal of the motor neuron.
C. Closure of the post-synaptic nicotinic acetylcholine receptor.
D. Removal of sarcoplasmic calcium.
E. Return of dihydropyridine receptor to its resting conformation.

Q4. In what way does visceral smooth muscle differ from skeletal muscle?

A. Visceral smooth muscle can contract in response to stretch.
B. Visceral smooth muscle does not contain actin filaments.
C. Visceral smooth muscle is capable of generating only about half the maximal force of contraction.
D. Contraction of visceral smooth muscle is ATP dependent.
E. The rate of cross bridge cycling in visceral smooth muscle is approximately 100 times faster than that in skeletal muscle.

Q5. Calmodulin is most closely related, both structurally and functionally to which of the following proteins?

A. G- actin
B. Troponin I
C. Troponin C
D. Tropomyosin
E. Myosin light chain

Q6. The resting potential of a myelinated nerve fiber is primarily dependent on the concentrate ion gradient of which ion?

A. K^+
B. Na^+
C. Ca^{++}
D. Cl^-
E. HCO_3^-

Q7. Smooth muscle contains:

A. Z membranes for anchoring of actin filaments
B. Titin to keep actin and myosin at their places
C. Dense bodies for actin filaments
D. Troponin C for Ca anachment
E. Many nuclei in each cell

Q8. Which of the following drugs would likely to eliminate the patient's symptoms in myasthenia gravis?

A. Curare
B. Atropine
C. Neostigmine
D. Botulinum toxin antiserum
E. Halothane

Q9. Stimulation of nicotinic receptors by acetylcholine causes:

A. Contraction of skeletal muscles
B. Decrease in heart rate
C. Secretion of saliva
D. Constriction of pupil
E. Contraction of gut

17 HDL is said to be a good lipoprotein because
(a) It carries proteins from liver to intestine
(b) It carries cholesterol from extra hepatic tissues to liver
(c) It carries cholesterol from liver to extra hepatic tissues
(d) It carries dietary triacylglycerol from intestine to liver
(e) It carries dietary glucose from intestine to liver

18 Chylomicrons are rich in
(a) Cholesterol ester
(b) Phospholipids
(c) Proteins
(d) Triacylglycerol
(e) Free cholesterol

19 Which of the following eicosanoids is a platelet aggregator & vasoconstrictor
(a) Thromboxane
(b) Prostaglandin G
(c) Prostaglandin H
(d) Prostaglandin D
(e) Prostaglandin A

20 Secondary bile acids are synthesized from primary in
(a) Liver
(b) Gall bladder
(c) Spleen
(d) Pancreas
(e) Intestine

21 Coenzyme A has
(a) Thiamine
(b) Riboflavin
(c) Vitamin A
(d) Pantothenic acid
(e) Niacin

22 FIGLU test is performed to detect the deficiency of
(a) Vitamin A
(b) Vitamin K
(c) Folic acid
(d) Ascorbic acid
(e) Niacin

23 Which of the following is required for the absorption of Vitamin B12
(a) Sucrose
(b) Bilirubin
(c) Intrinsic factor
(d) Glutathione
(e) Carnitine

24 Deficiency of which of the following minerals can cause tetany
(a) Sodium
(b) Calcium
(c) Potassium
(d) Iron
(e) Zinc

25 Which of the following has maximum number of minor bases (rare bases)
(a) Messenger RNA (mRNA)
(b) Transfer RNA (tRNA)
(c) Ribosomal RNA (rRNA)
(d) Small nuclear RNA (snRNA)
(e) Heterogenous nuclear RNA (hnRNA)

26 In the biosynthesis to heme the rate limiting step is catalyzed by
(a) Uroporphyrinogen reductase
(b) Uroporphyrinogen oxidase
(c) δ – aminolevulinate synthase (ALA synthase)
(d) Porphobilinogen reductase
(e) Porphobilinogen oxidase

27 Which of the following base pairs will have 3 hydrogen bonds
(a) A – T
(b) U – A
(c) T – G
(d) G – C
(e) A – A

28 Longer arm of transfer RNA (3' end) has terminal sequence which is
(a) UUA
(b) CCA
(c) GCA
(d) UGA
(e) AAA

29 In heme catabolism the first bile pigment is
(a) Biliverdin
(b) Bilirubin
(c) Cholic acid
(d) Chenodeoxycholic acid
(e) Lithocholic acid

30 Anticodon arm is present on
(a) DNA
(b) mRNA
(c) tRNA
(d) rRNA
(e) Both (a) & (b) are correct

31 When RBCs are placed in hypotonic solutions
(a) Will swell up
(b) Will shrink
(c) No change will occur
(d) Initialy swell up then shrink
(e) Both (b) & (c) are correct

32 Plasmogen is the example of
(a) Sphingophospholipids
(b) Lipoproteins
(c) Glycerophospholipids
(d) Eicosanoids
(e) Steroids

Plasmalogen

33 Heparin is a
(a) Heteropolysaccharides
(b) Homopolysaccharides
(c) Monosaccharides
(d) Disaccharide
(e) Oligosaccharide

34 Ornithine and citrulline are
(a) Sulphur containing amino acids
(b) Modified amino acids
(c) Non-standard amino acids
(d) Aromatic amino acids
(e) Acidic amino acids

35 The enzyme responsible for the conjugation of bilirubin
(a) Bilirubin glucuronyl transferase
(b) Bilirubin reductase
(c) Bilirubin oxidase
(d) Biliverdin Lyase
(e) Bilirubin Lyase

36 Action of glycogen synthase & phosphorylase in glycogen metabolism is an example of
(a) Isoenzymes
(b) Proenzymes
(c) Allosteric enzymes
(d) Zymogens
(e) Covalent modifications

37 Carbon dioxide fixation reactions require
(a) Pyridoxine
(b) Niacin
(c) Thiamine
(d) Biotin
(e) Pantothenic acid

38 In hemochromatosis the liver is infiltrated by
(a) Chromium
(b) Copper
(c) Iron
(d) Zinc
(e) Manganese

39 Maximum amount of minor bases is present in
(a) Messenger RNA
(b) Transfer RNA
(c) Ribosomal RNA
(d) Heterogenous nuclear RNA
(e) Small nuclear RNA

40 In kwashiorkor there is
(a) Deficiency of dietary proteins
(b) Deficiency of dietary carbohydrates
(c) Deficiency of dietary fats
(d) Deficiency of Vitamin C
(e) Deficiency of Thiamine

...AHEED MEDICAL
...OLLEGE LAHORE
MBBS 2012-17 (Physiology)
...test; Cell and membrane Physiology

...h of the following is true regarding Sinus ...?
...he heart rate usually increases with ...spiration and decreases with expiration.
... abnormal condition caused by the Ischemia of the A-V bundle
C. Seen in adults only and fatal.
D. There is intense sympathetic stimulation of SA node
E. Compression of the A-V bundle by scar tissue or by the calcified portions of the heart

...The murmurs are abnormal heart sounds ...letected using a stethoscope over the

A. Chest in congenital heart disease
B. Heart region in people suffering from severe anemia
C. Incompetent heart valves
D. Narrowed (stenosed) valves
E. All of the above

Q13. Ventricular extra systole

A. May sometimes occur in normal heart
B. Is associated with abnormal QRS-complex
C. Tends to be followed by a compensatory pause
D. May fail to produce pulse at the wrist called missed beat.
E. All of the above

Q14.Which of the following is true regarding ...inthoven law?

A. The flow of current in the heart is from apex to the base
B. Both the ventricles are not depolarized simultaneously
C. If two of the standard bipolar leads are recorded ,the third can be determined mathematically.
D. Can be expressed as II=I+III
E. Only C and D are true

Q15.When cardiac impulse travels around ...onditions around and around in cardiac muscle ...ithout stopping ,resulting cardiac arrhythmia is ...alled as

A. Missed beat
B. Ectopic focus
C. Circus movement
D. Sinus arrhythmia
E. Sick sinus syndrome

...16. Heart rate decreases in which of the following

A. Hyper thyroidism
B. Sympathetic stimulation
C. Hypothyroidism
D. Exercise
E. A,B and C are true

Q17.Which of the following is true regarding end-diastolic volume?

A. Volume of blood in ventricles after diastole
B. Increases when venous return increases
C. Increases when blood volume increases
D. It is equal to 120ml
E. All of the above

...8.which of the following wave is missed in second degree block

A. P-Wave
B. QRS-Complex
T-wave
C. ST-segment
D. PR-Interval

Q19. A patient with an electrolyte disturbance shows tall peaked T-wave on the ECG. He is most likely to increased level of:

A. Calcium
B. Sodium
C. Potassium
D. Chloride
E. Magnesium

Q20. Regarding atrial pressure changes, which of the following statement is true:

A. a wave is caused by atrial systole
B. V wave occurs atrial diastole when atria are filled with blood

C. c wave is produced due to bulging of the tricuspid valve into the right atrium during ventricular systole (isovolumic phase).

D. It can be observed by external jugular vein(JVP)

E. All of the above

...Q19.Which of the following is tru... peaked T-Wav... have decreased

...Magnesium

...All of the above

H.
I.
J.
K. heart block?
L. Regarding neurons, which of t...
M. A Sick sinus syndrome
N. B Sinus arrhythmia
O. C Ectopic beat
P. D Carotid sinus syndrome
Q. E Circus movement
R.

NAHEED MEDICAL
AZ COLLEGE LAHORE
MBBS 2012-17 (Physiology)
Test: Cell and membrane Physiology

INSTRUCTIONS
Dated: 11/02/2013

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best answer, all questions carry equal marks.

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:
A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

Q2. Most of the

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cycle and heme formation
C. Has enzymes for ox
D. Generates AT
E. All of the

RA NAHEED MEDICAL COLLEGE LAHORE

Department of Physiology

1st YEAR MBBS 2012-17

Revision Test: Circulation

MULTIPLE CHOICE QUESTIONS (MCQS)
Marks 20, Time =20mins
Select Single best answer, all questions carry er marks.
DATED: 25-0

INSTRUCTIONS
1-All objective questions are to be attempted on the paper and returned to invigilator within 20 minutes.
2-Any cutting and overwriting in objective part will not be accepted.

Q1. Mean arterial Pressure is?

A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic blood pressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

Q2. In which of the following conditions there will be a decreased cardiac output?

A. Hyperthyroidism
B. Beriberi
C. Atrioventricular fistula
D. Anemia
E. Acute myocardial infarction

Q3. Right ventricular failure leads to

A. Pulmonary edema
B. Reduced systemic arterial pressure
C. Decreased concentration of aldosterone in the blood
D. Edema of feet
E. Edema of face

Q4. Stimulation of baroreceptors leads to

A. Increase in blood pressure
B. Increase in heart rate
C. Decrease in blood pressure and decrease in heart rate
D. Increase in blood pressure and decrease in heart rate
E. Increase in blood pressure and increase in heart rate

Q5. Vessels which are not under sympathetic tone are

A. Arterioles
B. Capillaries
C. Veins
D. Small arteries
E. Large arteries

Q6. following conditions may result from the lo standing Hypertension except:

A. Renal failure
B. Cerebral haemorrhage
C. Retinal haemorrhage
D. Myocardial infarction
E. Hepatitis

Q7. Which of the following sets of differences b describes the hemodynamics of the pulmona circulation when compared with systen circulation?

	(Flow)	(Resistance)	(Arterial Pressure
A.	Higher	Higher	Higher
B.	Higher	Lower	Lower
C.	Lower	Higher	Lower
D.	Lower	Lower	Lower
E.	Same	Lower	Lower

Q8. Both the arterial and venous pressures come equilibrium when all flow in the systemic circulati ceases at a pressure of 7mmHg and this is called?

A. Mean systemic filling pressure
B. Mean arterial pressure
C. Mean venous return
D. Equilibrium pressure
E. Mean blood pressure

Q9. Immediately after an acute coronary occlusi blood flow ceases in the coronary vessels beyond t occlusion except for small amounts of collateral fl from surrounding vessels and results in ischen necrosis of heart muscles. This phenomenon called:

A. Angina pectoris
B. Atrial fibrillation
C. Cardiac tamponade
D. Myocardial infarction
E. Pericarditis

Q10. Coronary blood flow increases during:

A. Systole
B. Diastole
C. Repolarization of ventricle
D. Depolarization of ventricle
E. None of the above

Starling hypothesis
Guyton AC, Lindsley AW: Effect of elevated left atrial pressure and decreased plasma protein concentration on the development of pulmonary edema. Circ Res 7:649, 1959

the evolution of the pulmonary circulation. Am J Physiol Regul Integr Comp Physiol 304:R171, 2013.

Restrictive disease

- Restrict Inspiration.
- Restrict expansion of lung.
- ↓VC, TLC, RV, FRC
- Fibrosis
- Tuberculosis
- Silicosis
- Chest wall deformities.

obstructive disease

- Restricts expiration.
- ↓ VC, ↑ RV, FRC, TLC
- It includes:-
  COPD
  Asthma.

FEV1 (in 1st sec).

$\frac{FEV_1}{FVC}$ = or > 80%.

→ compliance ∝ $\frac{\text{Inspiration}}{\text{Expiration}}$.

Restrictive disease → ↓ Compliance → ↑ $\frac{FEV_1}{FVC}$

Obstructive disease → ↑ Compliance → ↓ $\frac{FEV_1}{FVC}$

tory membrane and adjacent fluids. However, in respiratory physiology, we are concerned not only with the basic mechanism by which diffusion occurs but also with the *rate* at which it occurs, which is a much more complex tissue, requiring a deeper understanding of the physics of diffusion and gas exchange.

Physics of Gas Diffusion and Gas Partial Pressures

Molecular Basis of Gas Diffusion

All the gases of concern in respiratory physiology are simple molecules that are free to move among one another by diffusion. This is also true of gases dissolved in the fluids and tissues of the body.

For diffusion to occur, there must be a source of energy. This source of energy is provided by the kinetic motion of the molecules. Except at absolute zero temperature, all molecules of all matter are continually undergoing motion. For free molecules that are not physically attached to others, this means linear movement at high velocity until they strike other molecules. They then bounce away in new directions and continue moving until they strike other molecules again. In this way, the molecules move rapidly and randomly among one another.

Net Diffusion of a Gas in One Direction—Effect of a Concentration Gradient. If a gas chamber or a solution has a high concentration of a particular gas at one end of the chamber and a low concentration at the other end, as shown in **Figure 40-1**, net diffusion of the gas will occur from the high-concentration area toward the low-concentration area. The reason is obvious: There are far more molecules at end A of the ... toward end B than there ... opposite direction ... each of the ...

... random ...
... Pressur...
... cules ag...
... acting o...
... alveoli is ...
... all the mole...
... instant. This ...
... to the concen...
... In respirat...
... gases, mainly o...
... of diffusion of ...
... to the pressure ...
... partial pressure ...
... can be explained a...
... Consider air, wh...
... 79 percent nitrogen ...
... sure of this mixture ...
... is clear from the prec...
... basis of pressure that ea...
... sure in direct proportio...
... 79 percent of the 760 ...
... (600 mm Hg) and 21 per...
... the "partial pressure" of ...
... 600 mm Hg, and the "partia...
... the total pressure is 760 mm ...
... partial pressures. The partial ...
... in a mixture are designated by ...
... PHe, and so forth.

Pressures of Gases Dissolved

Gases dissolved in water or in bod... sure because the dissolved gas mol... domly and have kinetic energy. E... dissolved in fluid encounters a surf... brane of a cell, it exerts its own ... way that a gas in the gas ... of the separate dissolv... the partial pressur...

AZRA NAHEED MEDICAL COLLEGE
ANATOMY DEPARTMENT
3rd module ist yearMBBS

TOTAL MARKS 50

SEQ

Qno1 a) Draw & label histological picture of spleen (5)

b)Define neurilation (1.5)

C) Give the structure and functions of placenta (3.5)

Qno2 a)Enlist the ligaments and bursae of knee joint , give anatomical basis of locking and unlocking mechanism of knee joint ?(4+3)

b) what is unhappy triad ?(2)

c)what is amelia? (1)

Qno3 A35 years old female presented in OPD with complain of femoral hernia , Give the boundaries and content of femoral triangle ? why femoral nerve is outside the femoral sheath ? give the boundaries of femoral ring also tell which ligament is torn in case of strangulation of femoral hernia ?(2.5+2.5+1+3+1)

Q-4 a) A patient with history of road side accident is presented to surgical emergency with complain of inability to dorsiflex his right foot . with the help of your knowledge justify the anatomical basis of foot drop ? (5)

b)Draw &label cutaneous nerve supply of lower limb ? (5)

Qno 5 a) what are varicose veins ? give origin course and termination of grat saphenous vein ?(1+3)

b) give the root value of sciatic nerve also give its course ,relation and branches of sciatic nerve (3)

c) give origin insertion and nerve supply of evertors of foot (3)

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2017-2018

Time = 20mins

Select single best answer, all questions carry equal marks.

Roll No- 95

UNIT TEST: Nerve & Muscle
Date: 12-03-18

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator **within 20 mins**
2-Any cutting and overwriting in objective part will not be accepted

1- Which of the following is considered as a membrane stibilizer & inhibit tetney

- A. Calcium ions
- B. Sodium ions
- C. Potassium ions
- D. Magnesium ions
- E. Adenosine triphosphate

2- Which of the following cytoskeletal proteins function like a spring, limiting the extent to which the sarcomere can be stretched?

- A. α-Actinin
- B. Dystrophin
- C. Nebulin
- D. Titin
- E. Z- disk

3- A 30 year old man came to the emergency department with complain of fatigue, muscle weakness, tingling feeling in the legs and arms and blurred vision for the past two days. He had a similar episode six months back. CSF (cerebrospinal fluid) was obtained by doing the spinal tap, which showed proteins that are breakdown product of myelin. MRI (magnetic resonance imaging) was done which showed demyelinated lesion in the brain and spinal cord. Nerve conduction tests showed decrease in conduction velocity. What is the probable diagnosis?

- A. Myasthenia gravis
- B. Tetanization
- C. Muscular dystrophy
- D. Multiple sclerosis
- E. Rigor mortis

4- When two acetylecholine bind to the nicotinic receptors on skeletal muscles, the channel opens and allows transmembrane passage of ions. Under normal physiological conditions which of the following ions will pass through these channels?

- A. Ca^{2+}
- B. Mg^{2+}
- C. H^{+}
- D. Cl^{-}
- E. Na^{+}

5- A pharmaceutical company wants to develop a drug that reduces smooth muscle induced vascular spasm. Which of the following enzymes will antagonize smooth muscle contraction and will be a suitable target of stimulation by this drug?

- A. Myosin phosphatase
- B. Myosin light chain kinase
- C. Myosin light chain phosphatase
- D. Protein kinase C
- E. Phospholipase C

6- A 14 year old boy with muscular dystrophy is found to have mutation of the gene that encodes the protein dystrophin. Genetic alteration in dystrophin leads to muscular weakness. What is the probable diagnosis?

- A. Duschenne muscular dystrophy
- B. Myasthenia gravis
- C. Multiple sclerosis
- D. Tetany
- E. Rigor mortis

7- A 30 year old woman is seen by a neurologist for her increasing muscle weakness. The neurologist suspects myasthenia gravis and decides to confirm the diagnosis by giving her a drug (neostigmine) that increases the muscle contraction. Which of the following explain the ability of neostigmine to increase the force of muscle contraction in patients with myasthenia gravis?

- A. Increasing the amount of acetylecholine secreted by the neurons in a neuromuscular junction
- B. Increasing the affinity of the acetylecholine receptors towards acetylecholine
- C. Decreasing the breakdown rate of acetylecholine by inhibiting esterase enzyme
- D. Decreasing the concentration of calcium in the extracellular fluid
- E. Increasing the concentration of calcium in the extracellular fluid

8- Which of the following nerve does not fulfill the criteria of regeneration?

- A. Nerve with the two cut ends in the same line
- B. Nerve with the two cut ends in the same line but the nucleus is extruded from the cell body.
- C. Nerve with the gap between the two cut ends is less than 3mm and lies in the same line
- D. Nerve fiber present in the central nervous system
- E. Both B & D

SEND UP EXAMINATION 2016
MBBS PART I
MCQs ~~Paper mark~~

AZRA NAHEED MEDICAL COLLEGE
DEPARTMENT OF BIOCHEMISTRY

Subject: Biochemistry
Resource Person: Prof. Muslim Khan

Total Marks: 30
Obtained Marks:

Name: _____

Roll No: _____

Date: _____

Time allowed: **30 minutes**

Instructions:
1. Each MCQ carries 1 mark.
2. All MCQs are to be attempted on the paper and returned to the invigilator within 45 minutes after you receive the question paper.
3. Any cuttings or overwriting and answering the objective part will not be accepted and no marks will be given even if the answer is correct.

1 Nucleolus is only present when
(a) Cell is non-dividing
(b) Cell is dividing
(c) Cell is involved actively in protein synthesis
(d) Cell is involved actively in carbohydrate synthesis
(e) Both (a) & (b) are correct

2 Lysosomes are involved in the
(a) Synthesis of polysaccharides
(b) Synthesis of proteins
(c) Synthesis of fat
(d) Synthesis of vitamin A
(e) Hydrolysis of polysaccharides, proteins, fats & nucleic acids

3 In diabetes mellitus specific gravity of urine is
(a) Decreased
(b) Increased
(c) No change is specific gravity
(d) It is decreased due to excretion of glucose
(e) It is decreased due to excretion of proteins in urine

4 Adsorption is inversely proportional to
(a) Atmospheric pressure
(b) Volume
(c) Temperature
(d) Humidity
(e) Both (a) & (b) are correct

5 Glucuronic acid is formed by oxidation of glucose at
(a) Carbon number 1
(b) Carbon number 2
(c) Carbon number 4
(d) Carbon number 5
(e) Carbon number 6

6 Polymer of fructose is
(a) Chitin
(b) Glycerol
(c) Glycogen
(d) Starch
(e) Inulin

7 Alpha D glucose and Beta D glucose are
(a) Epimers
(b) Aldo-keto isomers
(c) Optical isomers
(d) Stereoisomers
(e) Anomers

8 A disaccharide linked with α 1→6 linkage is
(a) Sucrose
(b) Lactose
(c) Maltose
(d) Iso-maltose
(e) Cellulose

9 Which of the following group has all the essential amino acids
(a) Alanine, Phenylalanine and Tryptophan
(b) Cysteine, Tyrosine and Methionine
(c) Glycine, Aspartate and Glutamate
(d) Lysine, Leucine and Valine
(e) Serine and Threonine

10 Collagen is
(a) Plasma protein
(b) Fibrous protein
(c) Nuclear protein
(d) Globular protein
(e) Metaloprotein

11 The immunoglobulins which can pass the placenta are
(a) IgD
(b) IgA
(c) IgG
(d) IgM
(e) Both (a) & (b)

12 The abnormal structure of Hb results from a point mutation
(a) Aspartic acid for Methionine
(b) Leucine for Isoleucine
(c) Glutamic acid for Valine
(d) Valine for Glutamic acid
(e) Glycine for Alanine

13 All the enzymes are protein in nature except
(a) Apoenzyme
(b) Holoenzyme
(c) Isoenzyme
(d) Proenzyme
(e) Ribozymes

14 Chemically the Ribozymes are
(a) Polysaccharides
(b) Inactive precursors of enzymes
(c) Vitamins
(d) Minerals
(e) RNA molecules having catalytic activity

15 A complete functioning enzyme together with its coenzyme or cofactor is called
(a) Apoenzyme
(b) Coenzyme
(c) Holoenzyme
(d) Isoenzyme
(e) Cofactor

16 Alkaline phosphatase is typically raised in which of the following conditions
(a) Diabetes mellitus
(b) Muscle disease
(c) Brain disorder
(d) Obstructive jaundice
(e) Heart disease

12

CLASS TEST ON CARBOHYDRATES - 2019
FIRST YEAR MBBS PART I – SEQs

Total marks: 60
Time Allowed: 2½ Hours

Name: Zbair Rashid
Roll No: 143

Q No. 1.

a. Define and classify carbohydrates with one example from each class (5)
b. What are the oxidation products of glucose under different conditions (5)

Q No. 2

a. What is asymmetric carbon atom? Explain D&L forms with examples (5)
b. Write a note on mutarotation (5)

Q No. 3

a. Mention reduction products of glucose, mannose, galactose and fructose (5)
b. Why hydrolysis of sucrose is known as inversion? (5)

Q No. 4

a. What is optical isomerism? Mention dextro and levorotatory sugars (5)
b. What are glycosides give example of O and N glycoside with their importance (5)

Q No. 5

a. Give occurrence, structure and physiological function of starch and cellulose (5)
b. What are heteropolysaccharides? Mention structures occurrence and importance of hyaluronic acid and chondroitin sulfate (5)

Q No. 6

a. What are buffers name various body buffers how bicarbonate buffer will tend to resist a change in pH on addition of acid and base? (5)
b. Write down Henderson-Hasselbalch equation and give its uses (5)

Q No. 7

a. What is the normal pH range of blood? What is acidosis and alkalosis ~~define pH pk and pk?~~ (5)
b. Define pH, pKa, & pKI (5)

20

...NAHEED MEDICAL
...OLLEGE LAHORE
MBBS 2012-17 (Physiology)
...est; Cell and membrane Physiology
Fir...

MULTIPLE CHOICE QUESTIONS (MCQ
Total Marks 20
Select Single best answer, all questions
carry equal marks.

...ese objective questions are to be attempted on the paper and returned to the invigilator within 25 mins.
...Cutting and overwriting in objective sort will not be accepted.

INSTRUCTIONS

Dated: 11/02/2

Q1. "Milieu interieur" is the internal environment provided in a multicellular organism like humans by:

A. Intracellular fluid
B. Extracellular fluid
C. Transcellular fluid
D. Blood
E. Cerebrospinal fluid

...f the control systems of the

Q6. The human cell mitochondria is a
A. membrane organelle
B. Contains enzymes for citric acid cyclear
heme formation
C. Has enzymes for oxidative phosphorylat
D. Generates ATP
E. All of the above

Q7. Synthesis of carbohydrates like chondroitin sulphate and hyaluronic a

11. Both the arterial and venous pressures come to equilibrium when all flow in the systemic circulation ceases at a pressure of 7mmHg and this is called?

A. Mean systemic filling pressure
B. Mean arterial pressure
C. Mean venous return
D. Equilibrium pressure
E. Mean blood pressure

12. Which of the following parts of circulation has highest compliance?

A. Capillaries
B. Large arteries
C. Veins
D. Aorta
E. Small arteries

13. If coronary artery diameter is reduced by 50% expected reduction in blood flow would be how many times less?

A. 4 times
B. 12 times
C. 64times
D. 16 times
E. 8 times

14. Which statement is correct regarding effects of hypoxia in pulmonary circulation?

A. It causes vasodilatation
B. It causes vasoconstriction
C. Increases pulmonary blood flow
D. Have no effect on pulmonary blood flow
E. None of the above

15. Loss of vasomotor tone after a history of spinal anesthesia is indicative of:

A. Hypovolemic shock.
B. Neurogenic shock.
C. Septic shock.
D. Anaphylactic shock.
E. Cardiogenic shock

16. The compensatory mechanisms in non-progressive shock include all of the following except:

A. Arteriolar constriction
B. Increased heart rate
C. Sympathetic over activity
D. Sludging of small blood vessels
E. Increased level of angiotensin 2

17. Generalized cellular deteri... the following in irreversible s...

A. Failure of Na K pump
B. Depressed mitochondrial activ...
C. Increased transcription & trans... pathwa...
D. Decreased glucose uptake
E. Breaking of liposomal membrane ...cid

18. Regarding Starling forces, which of following tends to decrease capillary filtra... rate?

A. Capillary hydrostatic pressure
B. Interstitial hydrostatic pressure
C. Plasma colloidal osmotic pressure
D. Lymphatic pump activity
E. Interstitial colloidal osmotic pressure

19. 35% loss of total blood volume leads to:

A. Compensated shock
B. Progressive shock
C. Irreversible shock
D. No effect on cardiac output & BP
E. None of the above

20. Cardiogenic shock may be due to the foll... reasons except:

A. Severe heart valve dysfunction
B. Heart arrhythmias
C. Hypothyroidism
D. Septicemia
E. Myocardial infarction

Marks: 35
Time: 25 Minutes

Azra Naheed Medical College, Lahore.

Roll # _____

PAPER # 3 , BIOCHEMISTRY (1ST YEAR MBBS)

MCQ's

1: The rate limiting enzyme of heme biosynthesis is:
- a. Pyruvate dehydrogenase complex
- b. Uroporphyrinogen decarboxylase
- c. ALA synthase
- d. Citrate synthase
- e. Lactate dehydrogenase

2: Which of the following groups has all the essential amino acids:
- a. Valine, Phenyl alanine & aspartic acid
- b. Tryptophan, Methionine& glycine
- c. Lysine, leucine & isolecuine
- d. Tyrosine, glutamic acid & valine
- e. Glutamic acid, Glycine & Alanine

3: Which of the following minerals is required by glutathione peroxidase:
- a. Ni
- b. Co
- c. Mn
- d. Zn
- e. Se

4: Exchange of the amino and keto groups between amino acids and keto acids is brought about by
- a. Catalase
- b. Hydroxylase
- c. Hydratase
- d. Phosphatase
- e. Alanine amino transferase (ALT)

5: Actin is a
- a. Structural protein
- b. Storage Protein
- c. Hormonal Protein
- d. Catalytic Protein
- e. Contractile Protein

6: Precursor of steroid hormones is:
- a. Lecithin
- b. Cephalin
- c. Plasmalogen
- d. Ceramide
- e. Cholesterol

7: Which of the following is not present in cell membrane.
- a. Cholesterol
- b. Lecithin
- c. Cephalin
- d. Acetoacetic acid
- e. All of the above

8: HDL is a good lipoprotein because it carries
- a. proteins from liver to intestine
- b. Cholesterol from liver to extra hepatic tissues
- c. Triacylglycerol from liver to extra hepatic tissues
- d. Dietry lipids from intestine to liver
- e. Cholesterol from extra hepatic tissues to liver

9: Hydroxy lysine is
- a. An essential amino acid
- b. Sulphur containing amino acid
- c. Modified amino acid
- d. Non standard amino acid
- e. None of the above

10: Ceruloplasmin is metallo protein which contains
- a. Fe
- b. Cu
- c. Zn
- d. Mn
- e. Co

11: Vitamin with antioxidant properties is:
- a. Riboflavin
- b. Niacin
- c. Vitamin E
- d. Pantothenic acid
- e. Folic acid

12: Deficiency of iron may cause
- a. Beri Beri
- b. Scurvy
- c. Hypoproteinemia
- d. Hyperglycemia
- e. Hypochromic microcytic anemia

13: Oxidation of which of the following gives highest energy
- a. Fat
- b. Proteins
- c. Glycogen
- d. Glucose
- e. Ketone bodies

14: UAA is an:
- a. Termination Codon
- b. Initiation Codon
- c. Condon for Asinine
- d. Condon for tyrosine
- e. Condon for Aspartic acid

15: Prolamins are soluble in:
- a. Absolute alcohol
- b. 40 – 50 % alcohol
- c. 70 – 80 % alcohol
- d. 10 – 20 % alcohol
- e. All of the above

16: α Helix in secondary structure of proteins has:
- a. 1.6 amino acids per turn
- b. 2.6 amino acids per turn
- c. 3.6 amino acids per turn
- d. 4.6 amino acids per turn
- e. 5.6 amino acids per turn

17: Collagen has high concentration of
- a. Tryptophan and tyrosine
- b. Phenyl alanine and Methionine
- c. Aspartic acid and Glutamic acid
- d. Glycine and hydroxyl proline
- e. Aspargine and Glutamine

18: The bond maintaining primary structure of proteins are
- a. Ionic bonds
- b. Hydrogen bonds
- c. Phosphodiester bonds
- d. Hydrophobic interactions
- e. Covalent bonds

19: Deoxy cholic acid is:
- a. Primary bile acid
- b. Secondary bile acid
- c. Ketone body
- d. Bile pigment
- e. Ceramide

20: Biosynthesis of cholic acid takes place in:
- a. Stomach
- b. Lungs
- c. Liver
- d. Small intestine
- e. Kidneys

21: Coenzyme A is formed from:
- a. Niacin
- b. Riboflavin
- c. Biotin
- d. Thiamine
- e. Pantothenic acid

22: Reduction product of fructose is:
- a. Sorbitol
- b. Mannitol
- c. Galactitol
- d. Both Sorbitol and Mannitol
- e. None of the above

Roll no. 83

ANATOMY DEPARTMENT

AZRA NAHEED MEDICAL COLLEGE, LAHORE

Total time: 120mins
Total Marks:50

6th Module
1st year MBBS
Short Essay Questions (SEQs)
Date 30-9-19

QNO1 Classify muscles on architectural basis ? give an example of strap like muscle from lower limb ? give origin,insertion , nerve supply and action of that muscle ?(2+1+2)

QNO2 Draw and label histological diagram of thick skin/(5)

QNO3 What is the different phases and results of fertilization (3+2)

QNO4 A35 years old female came to medical OPD with a complaint of difficulty in movements of shoulder joint , after investigation she was diagnosed as case of frozen shoulder .Give the anatomical justification regarding frozen shoulder ? Enlist the movements and muscle producing the movement on shoulder joint .(1+4)

QNO5 40 years old female after breast cancer surgery , came to surgical OPD for follow up check up . now her medial border of rt scapula is prominent , which nerve is damaged and which muscle is paralysed ,give the anatomical justification of winging of scapula (1+2+2)

QNO6 a) Draw and label brachial plexus (4)

b) what is waiters tip ?

QNO7 a) Give the boundaries and content of femoral triangle ?(3)

B) how femoral sheath is formed, why femoral nerve is outside the femoral sheath ? (2)

QNO8 a) What is trendelenbergs sign ? (1)

b) give the type , variety , muscles producing movements on hip joint ?(4)

QNO9 a) A 50 years old male presented in emergency department with history of road traffic accident . he is diagnosed as case of foot drop , give the involved nerve as well as muscles responsible for foot drop ?(1+2)

b) draw and label cutaneous nerve supply of foot ?(2)

QNO 10 (a) give abduction at shoulder joint. (1.5)

(b) Draw and label a diagram showing arterial anastomosis around elbow joint. (3.5)

MR
PA I R
Rech. front

Factors in Blood and Their Synonyms	
Factor	Synonym
Factor I	Factor I
Factor II	Factor II
Factor III	tissue thromboplastin
Factor IV	Factor IV
Factor V	Proaccelerin; labile factor; Ac-globulin (Ac-G)
Factor VII	Serum prothrombin conversion accelerator (SPCA); proconvertin; stable factor
Factor VIII	Antihemophilic factor (AHF); antihemophilic globulin (AHG); antihemophilic factor A
Factor IX	Plasma thromboplastin component (PTC); Christmas factor; antihemophilic factor B
Factor X	Stuart factor; Stuart-Prower factor
Factor XI	Plasma thromboplastin antecedent (PTA); antihemophilic factor C
Factor XII	Hageman factor
Factor XIII	Fibrin-stabilizing factor
Prekallikrein	Fletcher factor
High-molecular-weight kininogen	Fitzgerald factor; HMWK (high-molecular-weight) kininogen
Platelets	

Q5. Describe different variants of hemophilia.

Hemophilia A: It is a genetic X linked disease characterized by deficiency of or presence of abnormal Factor VIII. It is also known as classic hemophilia. Sign and symptoms include sever bleeding from minor injuries, easy bruisibility. Starts very early in children, males are affecte The platelet count, bleeding time and prothrombin time are normal but APTT is prolonged Diagnosis is established by demonstrating a totally absent or decreased levels of factor VI activity. Bleeding can be controlled by transfusion of fresh plasma,fresh frozen plasma, f VIII concentrates or even by transfusion of fresh blood.

Hemophilia B: It is also a genetic, X linked disease characterized by deficiency of Factor also known as Christmas disease. About 15 % of the hemophilia cases are hemophilia

Hemophilia C: Hemophilia C is a mild form of the disease that's caused by a deficienc factor XI. People with this rare type of hemophilia often don't experience spontaneo bleeding. Hemorrhaging typically occurs after trauma or surgery.

Biochemistry MCQs

Marks: 45
Time: 30 Minutes

Azra Naheed Medical College, Lahore.

Roll # _____

SEND UP EXAMINTAION 2012, BIOCHEMISTRY (1ST YEAR) Student Name: _____

1: In acute pancreatitis which of the following enzyme is raised in plasma
a. LDH
b. Creatinine kinase
c. Alanine aminitransferase (ALT)
d. Aspartate aminotransferase
e. Amylase

2: The precursors for heme synthesis are:
a. Succinyl-SCoA & glycine
b. Pyruvate and acetyl-SCoA
c. Arachidonic acid & aspatate
d. Tyrosine & succinyl- SCoA
e. Malonyl-SCoA and citrate

3: The rate limiting enzyme of heme biosynthesis is:
a. Pyruvate dehydrogenase complex
b. Uroporphyrinogen decarboxylase
c. ALA synthase
d. Citrate synthase
e. Lactate dehydrogenase

4: Pseudouridine arm of tRNA has base sequence which is:
a. TΨU
b. GGU
c. AGA
d. UCC
e. GGA

5: Ornithine & Citrulline are:
a. Neutral amino acid
b. Aromatic amino acid
c. non standard amino acid
d. modified amino acid
e. sulphur containing amino acids

6: Which of the following groups has all the essential amino acids:
a. Valine, Phenyl alanine & aspartic acid
b. Tryptophan, Methionine& glycine
c. Lysine, leucine & Isoleucine
d. Tyrosine, glutamic acid & valine
e. Glutamic acid, Glycine & Alanine

7: Rhodopsin is a:
a. Phosphoprotein
b. Nucleoprotein
c. Lipoprotein
d. Chromoprotein
e. Metalloprotein

8: What is not correct about cell membrane?
a. It is impermeable to fat soluble substances
b. May contain receptor proteins
c. It contains two layers of phospholipids
d. May contain glycoprotein molecules
e. May contain ion channels

9: Which of the following minerals is required by glutathione peroxidase:
a. Ni
b. Co
c. Mn
d. Zn
e. Se

10: If Km value is small, it reflects:
a. Low affinity of enzyme for substrate
b. It has no effect on reaction rate
c. High affinity of enzyme for substrate
d. All of the above are true
e. None of the above is true

11: Heparin is a:
a. Monosaccharide
b. Disaccharide
c. Oligosaccharide
d. Heteropolysaccharide
e. Homopolysaccharide

P 9 6 (lipids

12: Exchange of the amino and keto groups between amino acids and keto acids is brought about by
a. Catalase
b. Hydroxylase
c. Hydratase
d. Phosphatase
e. Alanine amino transferase (ALT)

13: Lactate dehydrogenase (LDH) has
a. One isomeric form
b. Two isomeric forms
c. Three isomeric forms
d. Four isomeric forms
e. Five isomeric forms

14: Action of glycogen synthase and phosphorylase in glycogen metabolism is an example of
a. Allosteric enzyme
b. Isoenzyme
c. Proenzyme
d. Covalent modification of enzymes
e. All of the above are true

15: Actin is a
a. Structural protein
b. Storage Protein
c. Hormonal Protein
d. Catalytic Protein
e. Contractile Protein

16: An increased level of serum "Acid Phosphatase" is observed in
a. Breast cancer
b. Liver cancer
c. Blood cancer
d. Prostate cancer
e. None of the above

17: Which one the following is an eighteen carbon essential fatty acid
a. Arachidonic acid
b. Myristic acid
c. Linolinic acid
d. Oleic acid
e. Palmito Oleic acid

18: Precursor of steroid hormones is:
a. Lecithin
b. Cephalin
c. Plasmalogen
d. Ceramide
e. Cholesterol

19: Which of the following lipids has no phosphate group
a. Ganglioside
b. Plasmalogen
c. Lecithin
d. Cephalin
e. Lysolecithin

20: Which of the following lipoprotein has highest concentration of triacylglyc
a. LDL
b. VLDL
c. IDL
d. HDL
e. Chylomicron

21: Which of the following is not present in cell membrane.
a. Cholesterol
b. Lecithin
c. Cephalin
d. Acetoacetic acid
e. All of the above

22: Which of the following eicosanoids has no cyclic ring.
a. Prostaglandin B
b. Prostaglandin H
c. Lipoxin
d. Thromoboxane
e. Prostaglandin E

P.T.O

AZAM NAHEED MEDICAL COLLEGE LAHORE

MBBS 2012-17 (Physiology)

First test; Cell and membrane Physiology

MULTIPLE CHOI
Total Marks 20
Select Single b
carry

Q1. "Milia

ch of the following is true regarding Sinus
ia"

The heart rate usually increases with inspiration and decreases with expiration.

B. abnormal condition caused by the Ischemia of the A-V bundle .

C. Seen in adults only and fatal.

D. There is intense sympathetic stimulation of SA node

E. Compression of the A-V bundle by scar tissue or by the calcified portions of the heart

The murmurs are abnormal heart sounds detected using a stethoscope over the

A. Chest in congenital heart disease
B. Heart region in people suffering from severe anemia
C. Incompetent heart valves
D. Narrowed (stenosed) valves
E. All of the above

Q13. Ventricular extra systole

A. May sometimes occur in normal heart
B. Is associated with abnormal QRS-complex
C. Tends to be followed by a compensatory pause
D. May fail to produce pulse at the wrist called missed beat.
E. All of the above

Q14.Which of the following is true regarding nthoven law?

A. The flow of current in the heart is from apex to the base
B. Both the ventricles are not depolarized simultaneously
C. If two of the standard bipolar leads are recorded ,the third can be determined mathematically.
D. Can be expressed as II=I+III
E. Only C and D are true

Q15.When cardiac impulse travels under abnormal conditions around and around in cardiac muscle without stopping ,resulting cardiac arrhythmia is called as

A. Missed beat
B. Ectopic focus
C. Circus movement
D. Sinus arrhythmia
E. Sick sinus syndrome

Heart rate decreases in which of the following

. Hyper thyroidism
. Sympathetic stimulation
. Hypothyroidism
. Exercise
. A,B and C are true

Q17.Which of the following is true regarding end-diastolic volume?

A. Volume of blood in ventricles after diastole
B. Increases when venous return increases
C. Increases when blood volume increases
D. It is equal to 120ml.
E. All of the above

Q18. which of the following wave is missed in second degree block

A. P-Wave
B. QRS-Complex
T-wave
C. ST-segment
D. PR-Interval

Q19.Which of the following is tru
peaked T-Wav
have been decreased

Q19. A patient with an electrolyte disturbance shows tall peaked T-wave on the ECG. He is most likely to increased level of:

A. Calcium
B. Sodium
C. Potassium
D. Chloride
E. Magnesium

Q20. Regarding atrial pressure changes, which of the following statement is true:

A. a wave is caused by atrial systole
B. V wave occurs atrial diastole when atria are filled with blood

C. c wave is produced due to bulging of the tricuspid valve into the right atrium during ventricular systole (isovolumic phase).

D. It can be observed by external jugular vein(JVP)

E. All of the above

I. All of the above
II.
I.
J.
K. heart block?
L. Regarding neurons, which of t
M. A Sick sinus syndrome
N. B Sinus arrhythmia
O. C Ectopic beat
P. D Carotid sinus syndrome
Q. E Circus movement
R.

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

MID MODULAR TEST: Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 07-05-2019

MARKS= 20
TIME = 30mins

Q1. A 30 year old man came to emergency department with high grade fever (102° F), cough and pain on swallowing. On examination, he has large & swollen tonsils (inflammation of tonsils). Complete blood picture was ordered immediately. (1+4)

I. **Which type of leucocytes will be increased in this condition?**
II. **Classify WBC's. Give one function of each type of cell?**

Q2. A) Define inflammation? Explain in detail the different lines of defense in inflammation. (3+2)

B) Describe in detail the bilirubin cycle? (2.5+2.5)

Q3. A) Enumerate the different stages of Erythropoisis?
B) Explain the mechanism of regulation of red blood cell production? (1+2+2)

Q4. A) Define anemia. Classify the different types of anemia?
B) Explain in detail the complete blood picture in case of iron deficiency anemia?

NAHEED MEDICAL
COLLEGE LAHORE
MBBS 2012-17 (Physiology)
First test: Cell and membrane

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single best a

Cell and membr (MCQS)

NAHEED M
COLLEGE L
MBBS 2013
2013-14 (Physiology)
SYSTEM TEST:
BLOOD PHYSIOLOGY - 1

Select Single best answer,
All questions carry equal marks.
Dated: 17-04-2014

INSTRUCTIONS:
1. All objective questions are to be attempted on the paper and returned to the hall/ not within 20 mins.
2. Any cutting and overwriting in objective part will not be accepted.

Q1. Inflammation is acute response of the tissue to injury. Which of the following plasma proteins is responsible for "walling off" effect of inflammation?

A. Prothrombin
B. Albumin
C. Fibrinogen
D. γ Globulin
E. α Globulin

Q2. Serum differs from plasma in lacking:

A. Albumin
B. Fibrinogen
C. Globulin
D. Ferritin
E. Apoferritin

blood

Q3. Which are the most abundant of all the cells of the blood?

A. Lymphocytes
B. Neutrophils
C. Monocytes
D. Platelets
E. Red blood cells

Q4. The following cell is devoid of the hemoglobin:

A. Erythrocyte
B. Reticulocyte
C. Intermediate normoblast
D. Late normoblast
E. Pronormoblast

Q5. Maturation of erythroblasts involves:

A. Increase in size of cell
B. Condensation of chromosomes in nucleus
C. Accumulation of hemoglobin
D. Pyknosis of nucleus
E. Breakage of cell membrane

Q6. The oxygen and carbon dioxide exchange in RBCs maximum with the following configuration of red cells:

A. Spherical
B. Oval
C. Triangular
D. Pentagonal
E. Biconcave

Q7. In an adult human the red cells are formed continuously in the bone marrow of the:

A. Sesamoid bones
B. Shafts of long bones
C. Lower ends of the long bones
D. Metatarsal bones
E. Phalangeal bones

Q8. Fe in the liver parenchymal cells is stored in the form of:

A. Apoferritin
B. Transferrin
C. Hemosiderin
D. Ferritin
E. Hemochromatin

Q9. The protein responsible for iron transport in plasma is:

A. α 1-anti trypsin
B. Ferritin
C. Apo-transferrin
D. apo-ferritin
E. Ceruloplasmin

Q10. The erythropoietin level in the blood of the following will be high:

A. Olympic marathon runner
B. End stage renal disease
C. Polycythemia vera
D. Spl
E.

Apoferritin

13: Which of the following enzymes is inhibited by Aspirin
- a. Lipoxygenase
- b. Lipase
- c. Amylase
- d. Cyclo - Oxygenase
- e. None of the above

14: HDL is a good lipoprotein because it carries
- a. proteins from liver to intestine
- b. Cholesterol from liver to extra hepatic tissues
- c. Triacylglycerol from liver to extra hepatic tissues
- d. Dietry lipids from intestine to liver
- e. Cholesterol from extra hepatic tissues to liver

15: Which of the following amino acid has an aromatic side chain
- a. Glycine
- b. Alanine
- c. Tyrosine
- d. Serine
- e. Threonine

16: Which of the following is an acidic amino acid?
- a. Histidine
- b. Lysine
- c. Leucine
- d. Aspartate
- e. Glycine

17: Hydroxy lysine is
- a. An essential amino acid
- b. Sulphur containing amino acid
- c. Modified amino acid
- d. Non standard amino acid
- e. None of the above

18: Which of the following proteins is present in association with mucin acid
- a. Keratins
- b. Albumin
- c. Globulin
- d. Collagen
- e. Histones

19: The highest concentration of cysteine is in
- a. Melanin
- b. Heparin
- c. Keratin
- d. Collagen
- e. Myosin

20: Ceruloplasmin is metallo protein which contains
- a. Fe
- b. Cu
- c. Zn
- d. Mn
- e. Co

21: The Vitamin associated with the synthesis of prothrombin is:
- a. Ascorbic acid
- b. Thiamine
- c. Vitamin A
- d. Vitamin K
- e. Riboflavin

22: The Vitamin acting as coenzyme for alkaline phosphatase is
- a. Vitamin D
- b. Vitamin E
- c. Vitamin K
- d. Biotin
- e. Thiamine

23: Vitamin with antioxidant properties is:
- a. Riboflavin
- b. Niacin
- c. Vitamin E
- d. Pantothenic acid
- e. Folic acid

24: Pellagra is caused by the deficiency of:
- a. Riboflavin
- b. Biotin
- c. Pyridoxine
- d. Pantotheenic acid
- e. Niacin

25: Which of the following factors is required for the intestinal absorption of Vitamin B_{12}
- a. Simple diffusion
- b. Lecithin
- c. Fructose
- d. Intrinsic factor
- e. Bile pigments

26: Deficiency of iron may cause
- a. Beri Beri
- b. Scurvy
- c. Hypoproteinemia
- d. Hyperglycemia
- e. Hypochromic microcytic anemia

27: Hypokalemia is associated with
- a. T wave inversion in ECG
- b. Muscular weakness
- c. Cardiac arythemia
- d. All of the above
- e. None of the above

28: Iron containing pigment is:
- a. Bilirubin
- b. Biliverdin
- c. Serum feroxidase
- d. Hemosiderin
- e. Cholic acid

29: Oxidation of which of the following gives highest energy
- a. Fat
- b. Proteins
- c. Glycogen
- d. Glucose
- e. Ketone bodies

30: Feeding of raw eggs in diet may cause deficiency of
- a. Niacin
- b. Biotin
- c. Riboflavin
- d. Thiamine
- e. Pantothenic acid

31: Svedberg coefficient of eukaryotic ribosomal RNA is
- a. 50s
- b. 70s
- c. 80s
- d. 40s
- e. 90s

32: UAA is an:
- a. Termination Codon
- b. Initiation Codon
- c. Condon for Aalnine
- d. Condon for tyrosine
- e. Condon for Aspartic acid

33: Messenger RNA is synthesized in
- a. Cytosol
- b. Nucleus
- c. Lysosomes
- d. All of the above
- e. None of the above

34: In tRNA the 3' terminal (longer arm) ends with the sequence:
- a. CGG
- b. CGA
- c. CCA
- d. CCC
- e. CAC

35: Prolamins are soluble in:
- a. Absolute alcohol
- b. 40 – 50 % alcohol
- c. 70 – 80 % alcohol
- d. 10 – 20 % alcohol
- e. All of the above

13- Which of the following sequence of events is correct for excitation-contraction coupling in skeletal muscle?

A. Increased intracellular Ca^{++} → action potential in muscle membrane → cross- bridge formation.
B. Action potential in muscle membrane → depolarization of T tubules→ release of Ca^{++} from sarcoplasmic reticulum
C. Action potential in the muscle membrane→splitting of ATP→ binding of Ca^{++} to troponin C.
D. Release of Ca^{++} from sarcoplasmic reticulum→ depolarization of T tubules→ binding of Ca^{++} to troponin C.
E. Release of Ca^{++} from sarcoplasmic reticulum→binding of Ca^{++} to troponin C→depolarization of T tubules.

B

CHEMISTRY OF PROTEINS
CLASS TEST, 1st Year MBBS

Total marks: 70
Time Allowed: 2 hours

Q No. 1.

a. What are amino acids? What are essential and nonessential amino acids. Name essential amino acids. (5)
b. Classify amino acids according to their structure with one example of each. (5)

Q No. 2

a. What are proteins? Classify proteins according to their function with one example from each class. (5)
b. What are plasma proteins? Name major plasma proteins along with their normal values and functions. (5)

Q No. 3

a. Discuss the role/functions of albumin and clinical application in our body. (5)
b. What is edema? What are its causes? (5)
Discuss the process of edema formation and its treatment.

Q No. 4

a. What are acute phase proteins? Discuss the role of three major acute phase proteins. (5)
b. What are clotting factors? (5)
Discuss the role and clinical significance of prothrombin and fibrinogen.

Q No. 5

a. What are immunoglobulins? Draw and explain the general structure of immunoglobulin. (5)
b. Enumerate different classes of immunoglobulins and discuss their individual role. (5)

Q No. 6

a. Name different types of separation techniques used to separate different types of proteins. (5)
Differentiate between electrophoresis & chromatography.
b. What are precipitation methods. Discuss two of them. (5)

Q No. 7

Write Short Notes on

a. Bence Jones proteins (2)
b. Wilson's disease (2)
c. Denaturation and renaturation of proteins (2)
d. Immunoelectrophoresis (2)
e. Tertiary structure of proteins

Date: 28-02-2014

Azra Naheed Medical College, Lahore

1st Year MBBS

Time:

Marks:

Class Test on Carbohydrates

Attempt all Questions

Question: 1

(a) Define and classify carbohydrates with two examples from each class. (4)

(b) What is optical isomerism? (3)

Question: 2

(a) Write a short note on mutarotation. (4)

(b) Draw Fisher and Howarth structure of glucose. (2)

Question: 3

(a) Describe D and L isomerism, epimersim and anomersim (5)

(b) Why hydrolysis of sucrose is called inversion? (2)

Question: 4

(a) What are oxidation products of glucose under various conditions? (3)

(b) Name the reduction products of glucose, galactose, mannose and fructose. (4)

Question: 5

(a) What is cellulose? Give its biological importance. Explain why starch can be digested by humans but not cellulose (3)

(b) Give structure and functions of starch and glycogen. (4)

Question: 6

(a) What are heteropolysaccharides, give composition occurrence and functions of hyaluronic acid. (3)

(b) A 30 years old male visited the physician complaining of bloating & diarrhea. He told that he had previous such episodes after ingestion of milk and milk products.

i. What clinical disorder do you suspect? (3)
ii. What is the cause of this disorder?
iii. How these episodes can be prevented?

19- Depolarization:

A. Is associated with increase in membrane permeability to Na+ .
B. Is terminated with closure of voltage activated K + channels.
C. Causes muscle relaxation
D. Is caused by K+ efflux.
E. Is associated with opening of the Na+ leaky channels

12- In a neuromuscular junction, Ca^{++} influx in the pre-synaptic terminal causes

A. Action potential

B. Release of the neurotransmitter in the synaptic cleft

C. Pre- synaptic inhibition

D. Depolarization of the nerve fiber

E. Inhibition of transmitter release

B

23: Which of the following lipids has no phosphate group a. Ganglioside b. Plasmalogen c. Lecithin d. Cephalin e. Lysolecithin	24: HDL is a good lipoprotein because it carries a. proteins from liver to intestine b. Cholesterol from liver to extra hepatic tissues c. Triacylglycerol from liver to extra hepatic tissues d. Dietry lipids from intestine to liver e. Cholesterol from extra hepatic tissues to liver
25: Vitamin with antioxidant properties is: a. Riboflavin b. Niacin c. Vitamin E d. Pantothenic acid e. Folic acid	26: Feeding of raw eggs in diet may cause deficiency of a. Niacin b. Biotin c. Riboflavin d. Thiamine e. Pantothenic acid
27: Messenger RNA is synthesized in a. Cytosol b. Nucleus c. Lysosomes d. All of the above e. None of the above	28: An enzyme which breaks up terminal peptide bond is: a. dehydrogenase b. Reductase c. Exopeptidase d. Kinase e. Amylase
29: Exoskeleton of insects is made up of: a. Innulin b. Glycogen c. Dextrans d. Dextrins e. Chittin	30: Messenger RNA has: a. Poly A tail at 3' end b. 7 methyl guanosine at 5' end c. It gets the message from DNA for the syntheus of proteins d. All of the above are true e. None of the above is true

5- Which of the following nerve does not fulfill the criteria of regeneration?

A. Nerve with the two cut ends in the same line
B. Nerve with the two cut ends in the same line but the nucleus is extruded from the cell body.
C. Nerve with the gap between the two cut ends is less than 3mm and lies in the same line
D. Nerve with disrupted neurilemma but the nucleus is present inside the nerve body
E. Both B & D

E

18-Which of the following is not present in the axon part of neuron?

- A) Myelin sheath
- B) Neurilemma
- C) Mitochondria
- D) Nissel bodies
- E) Axoplasmic vesicles

- A 44-year-old man develops gastric carcinoma affecting the proximal one third of the stomach. He is scheduled for the partial gastrectomy of the affected region. Which of the following process will be affected by this procedure?

A. Peristalsis
B. Retropulsion
C. Segmentation
D. Storage function
E. None of the above

- 1-At which labeled point on the action potential is the K+ closest to it electrochemical equlibrium?

A. 2
B. 3
C. 4
D. 5
E. 6

AZRA NAHEED MEDICAL COLLEGE
ANATOMY DEPARTMENT
3rd module ist yearMBBS

TOTAL MARKS 50

SEQ

Qno1 a) Draw & label histological picture of spleen (5)

b)Define neurilation (1.5)

C) Give the structure and functions of placenta (3.5)

Qno2 a)Enlist the ligaments and bursae of knee joint , give anatomical basis of locking and unlocking mechanism of knee joint ?(4+3)

b) what is unhappy triad ?(2)

c)what is amelia? (1)

Qno3 A35 years old female presented in OPD with complain of femoral hernia , Give the boundaries and content of femoral triangle ? why femoral nerve is outside the femoral sheath ? give the boundaries of femoral ring also tell which ligament is torn in case of strangulation of femoral hernia ?(2.5+2.5+1+3+1)

Q-4 a) A patient with history of road side accident is presented to surgical emergency with complain of inability to dorsiflex his right foot . with the help of your knowledge justify the anatomical basis of foot drop ? (5)

b)Draw &label cutaneous nerve supply of lower limb ? (5)

Qno 5 a) what are varicose veins ? give origin course and termination of grat saphenous vein ?(1+3)

b) give the root value of sciatic nerve also give its course ,relation and branches of sciatic nerve (3)

c) give origin insertion and nerve supply of evertors of foot (3)

15 Active site of an enzyme is
(a) Where the substrate binds
(b) Where the product binds
(c) Where both product & substrate bind
(d) Where the catalyst binds
(e) Is always at one end of the enzymes

16 Exergonic reactions
(a) Are reversible
(b) Release energy
(c) Absorb energy
(d) Do not go to completion
(e) Both (a) & (b) are correct

17 Affinity of enzyme to substrate is denoted by
(a) Vmax
(b) Km
(c) Class of enzymes
(d) pH
(e) Q10

18 Activity of an enzyme at 50°C
(a) Will increase
(b) Will decrease
(c) Will not be affected
(d) Will depend on pH
(e) Temperature has no role in enzymes activity

19 Competitive inhibition of enzymes is
(a) Irreversible
(b) Reversible
(c) Is affected by product concentration
(d) Increases Vmax
(e) Decreases Vmax

20 Increasing the substrate concentration
(a) Will abolish competitive inhibition
(b) Will abolish non-competitive inhibition
(c) Will reverse a reaction
(d) Will not affect enzyme inhibition
(e) None of the above is true

21 Allosteric enzyme
(a) Has two binding sites for substrate
(b) Has two binding sites one for substrate and one for product
(c) Has two binding sites one for substrate and one for modifier
(d) Has two binding sites one is active and other is inactive
(e) Has only one site.

22 Key enzymes are
(a) Shaped like a key
(b) Only act by lock and key mechanism
(c) Are rate limiting enzymes in a particular pathway
(d) Are competitive enzyme inhibitors
(e) Are non-competitive enzyme inhibitors

23 Ribozymes are
(a) Enzymes present in ribosomes
(b) Enzymes which produce ribosomes
(c) Enzymes which catalyze ribosomes
(d) Enzymes which catalyze RNA
(e) RNA molecules with enzyme activity

24 Isoenzymes are
(a) Physically distinct forms of the same enzyme activity
(b) Physically same but with different enzyme activity
(c) Are Isomerases
(d) Only present in heart
(e) Only present in brain

25 CK-MB is raised in
(a) Acute muscle injury
(b) Brain injury
(c) Injury to kidneys
(d) Myocardial infarction
(e) Liver cirrhosis

26 Which of the following enzymes is used in treatment of acute myocardial infarction
(a) Asparaginase
(b) Streptokinase
(c) Streptodornase
(d) Alpha-1-trypsin
(e) Papain

27 Enzyme used in treatment of acute leukemia is
(a) Asparaginase
(b) Streptokinase
(c) Streptodornase
(d) Alpha-1-trypsin
(e) Urokinase

28 PSA is the marker of
(a) Bone cancer
(b) Prostate cancer
(c) Breast cancer
(d) Liver cancer
(e) Acute lymphoblastic leukemia

29 Gamma glutamyl transferase (GGT) is raised in
(a) Obstructive and alcoholic liver disease
(b) Myocardial infarction
(c) Cholecystitis
(d) Cholelithiasis
(e) Malaria

30 Troponins are accepted as specific markers of
(a) Stroke
(b) Cirrhosis of liver
(c) Ca breast
(d) Myocardial infarction
(e) Non Hodgekin's lymphoma

FATIMA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

3rd MODULE TEST: Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)

ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 22-05-2019

MARKS= 60
TIME = 1 hr 10 min

Q1. A) Define anemia. Classify the different types of anemia? (3+2+5)
B) Explain in detail the complete blood picture along with indices in case of megaloblastic anemia anemia?
C) Enumerate the different stages of Erythropoisis & enlist all the factors regulating red blood cell production?

Q2. A) Define inflammation? Explain in detail the different line of defenses during inflammation? (3+3)
B) Describe the mechanism of cellular immunity in detail?
C) A 15 year old boy came to the emergency department with high grade fever, shivering & sore throat. (1+1+2)
Complete blood examination was done showing TLC= 15000/mm^3 , ESR= 50 & Hb= 14gm/dl
I. What is the most likely cause of this condition?
II. What are the substances released in inflammation that cause increased WBC count?
III. What is the composition of pus?

Q3.A) Give an account of role of Helper T cells in Active immunity? (3+3+4)
B) Draw structure of antibody and enlist the methods of killing of bacteria by the antibodies?
C) Define allergy. Enlist all of its types with the help of examples.

Q4. A) Define hemostasis and enlist the main steps involved in hemostasis?
B) A 14 year old boy was brought to the emergency department with severe abdominal pain. (3+1+2+2)
An acute appendicitis was diagnosed and immediate surgery was advised.
I. Which clotting mechanism will be involved in blood coagulation during surgery?
II. Give the mechanism of clotting involved in the above seenerio in cascade form?
III. Which investigation should be done before the surgical procedure regarding the hemophilic profile?
C) Describe the fibrinolytic system of blood clotting? (3+3

Q5.A) Enlist the transfusion reactions in case of mismatch blood transfusion?
B) Define Rh incompatibility. What disturbances may be present in the newborn suffering from erythroblastosis fetalis?
C) Which type of blood groups are called Universal donor and universal recipient & why? (2+2+2

Q6. Define the following
I. Polycythemia
II. Purpura
III. Hemophilia
IV. Heparin
V. Leukemia

Q3. Enlist and explain all the lab investigations that should be done in order to fin... diagnosis.

1. **Clotting Time:** It is prolonged in Hemophilias and other clotting factor deficienc... remains unaffected in purpura. Normal clotting time is 4-10 minutes.
2. **Prothrombin Time:** PT is the measure of extrinsic pathway of clotting. Normal value ... **11-12 seconds**
3. **Activate Partial Thromboplastin Time (APTT):** It is the measure of intrinsic pathway of clotting (factors 12,11,9,8,10,5,2 and 1) except platelets. Normal value is 30-45 seconds.
4. **Thrombin Time (T.T):** It is prolonged in fibrinogen deficiency, dysfibrinogenemia and when the plasma has thrombin inhibitors like heparin and fibrin degradation products F.D.Ps. Normal value is 10-12 seconds.
5. **Bleeding Time**: It is the time taken by the bleeding to stop after a cut is known as bleeding time. It is prolonged in purpuras (platelet deficiency). Normal value is 1-5 minutes.
6. **Blood Platelet Count**
7. **Plasma Fibrinogen and Fibrin degradation products:** Low in hypofibrinogenemias or dys... fibrinogenemia and excessive fibrinolysis
8. **Assay of Clotting factors**
9. **Capillary fragility test:** A strog positive pressure (as by inflating a sphygmomanometer cuff) is applied to the upper arm and number of oetechial heamorrages on the skin is noted. The count of petechial hemorrhages is greatly increased in Platelet deficiency or other forms of purpura.

Q4. Make a list of clotting factors along with their name and number and specify which may be deficient in above scenario?

PHYSIOLOGY DEPARTM...
1st YEAR MBBS 2018-19

TEST; Foundation Module Test

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS.ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 5-03-2019

MARKS= 50
TIME= 2 hours 10 min

SEQs

Q1.A) Define homeostasis. Enlist all the homeostatic parameters for normal cell functioning.
B) A 40 year old man came to the emergency department confused and feeling lethargic. On examination his B.P: 120/80, Pulse rate: 72b/min and normal respiratory rate. Following are the la investigations serum electrolytes: Na = 142mmol/L, K = 4.2mmol/L, Blood gases showed PO_2: 95mmHg, PCO_2: 45mmHg, Blood glucose level = 50mg/dl. (3+2)
I. What is the probable diagnosis?
II. What treatment should be given to this patient? (2+1+2)

Q2.A) What is a control system? Give its components.
B) Enlist the mechanisms of functioning of control system?
C) Explain feed forward mechanism with the help of an example?

Q3.A) Compare the structure and function of smooth and rough endoplasmic reticulum. (2.5+2.5)
B) Compare the functions of lysosomes and peroxisomes. (2+3)

Q4.A) Define Gene, Genetic code, Codon & Anticodon.
B) Describe the mechanism of translation in detail? (5)

Q5. Define gene expression & how is it regulated? Explain with the help of a diagram. (2+3)

Q6.A) Enlist all the means of transport across the cell membrane.
B) Compare primary and secondary active transport with the help of examples. (4+

Q7.A) Enlist the different modes of intracellular cell signaling.
B) A 5 year old boy came to the outpatient department with history of severe malnutrition. O examination there is ascites (fluid accumulation in abdominal cavity) and edema of ankle What is the probable cause of edema in this patient?

Q8.A) Explain the forces involved in the formation of interstitial fluid? (2.5
B) Define hyperkalemia and give its causes.

Q9.A) Enlist all the cell junction.
B) Give the functions of tight and gap junctions in the body.

Q10. Define the following
I. *Ligand*
II. *Glycocalyx*
III. *G-Protein*
IV. *Osmole*
V. *Vmax*

First Professional MBBS (Part-I) Annual Examination

BIOCHEMISTRY

SUBJECTIVE

Total Marks 35

DATED: 10-09-2018

Total Time 2 Hours

INSTRUCTIONS

1. All subjective part is to be submitted within 120 minutes, no extra time will be given.
2. Neat handwriting, use of margins will increase the outlook for presentation of your paper.

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS

1. Define p^H and p^K. Discuss the role of buffers and kidneys in maintaining the pH of blood. (5)

2. Describe carbohydrates under the heading.
   - Classify monosaccharides
   - Oxidation under different conditions
   - Reduction of monosaccharide
   - Mutarotation

3. A neonate died soon after birth due to severe repiratory depression. He was diagnosed as a case of respiratory distress syndrome (RDS).
   i. What deficiency causes this syndrome? Dipalmitoyl lecithin (1)
   ii. What is the chemical nature and physiological functions of this compound? (3)
   iii. Why death has occurred in this neonate? (1)

2 (ii) What are eicosanoids? Name cyclic and non cyclic eicosanoids. Enumerate physiological functions of prostaglandins. (2)

(i) Draw the structure of tRNA & give its salient features. (3)

1 (ii) What is codon? Describe any four characteristics of the codons. (2)

5. What are different levels of structural organization of proteins? Describe tertiary structure with an example. (3)

(ii) Give an outline of reactions with enzymes in the biosynthesis of heme. (2)

6. (i) Classify Vitamins. What are the deficiency effects of Vitamin B1, Niacin and Vitamin C? (3)

(ii) Give the functions and regulation of Calcium and Iron in the body. (2)

7. Describe various theories regarding mechanism of action of enzymes. (5)

(ii) Name in order the main six classes of the enzymes. Discuss any two factors affecting the enzyme activity. (5)

AZRA NAHEED MEDICAL COLLEGE
DEPARTMENT OF BIOCHEMISTRY

ASSESSMENT THIRD MODULE
CLASS TEST, 1st Year MBBS

Total marks: 70
Time Allowed: 2 HOURS

Q No. 1.

a. Define and classify lipids with one example form each class. What is the biological importance of fats? [6]
b. What are polyunsaturated fatty acids (PUFA)? Why these are called essential fatty acids? [6]

Q No. 2

a. What is the difference between cephalin and Plasmalogen? Give biological role of both the lipids.
b. What is respiratory distress syndrome? Give its reason and consequences.

Q No. 3

a. Name ketone bodies, mention site of synthesis. Why liver is unable to utilize ketone bodies for energy purpose?
b. What is rancidity of fat? How it can be prevented?

Q No. 4

a. What are lipoproteins? Classify on the basis of density. Write down the site of synthesis, functions and composition of chylomicrons.
b. What are gangliosides? Give composition and biological importance of gangliosides.

Q No. 5

a. Name the precursors of eicosanoids, mentions cyclic and non-cyclic eicosanoids. What is the biological importance of prostaglandins, thromboxanes and leukotrienes.
b. Write down chemical properties of unsaturated fatty acids.

Q No. 6

a. What are steroids? Give biological importance of cholesterol.
b. What are bile acids? Name primary and secondary bile acids with their sites of synthesis. Mention the physiological functions of bile acids.

(PHYSIOLOGY)

INSTRUCTIONS
1-All subjective part is to be submitted within 40mins, no extra time will be given.
2-Neat handwriting, use of margins will increase the outlook /presentation of your paper.

UNIT TEST: NERVE & MUSCLE PHYSIOLOGY

SUBJECTIVE PART

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

Time = 40mins

TOTAL MARKS 30

DATE: 9-3-2015

Q1.A)What is resting membrane potential .How it is maintained? (2.5)
B). Describe the wallerian degeneration in detail? (2.5)

Q2.A) Classify the nerve fiber according to the diameter and conduction velocity? (2)
B)Draw and label the action potential of a nerve fiber .Also explain ionic changes in each phase? (3)

Q3. A) Describe in detail the Molecular mechanism of skeletal muscle contraction? (3)
B) Give the mechanism of excitation-contraction coupling in skeletal muscle? (2)

Q4I)A) Explain with the help of diagram the neuromuscular transmission across the neuromuscular junction? (2.5)
B) A 30 year old lady complained of double vision (diplopia), severe muscle weakness & fatigue. She has drooping of eyelids and an enlarged shadow of thymus on ultrasound. Autoantibodies are detected in plasma.? (2.5)
a) Give the diagnosis?
b) What is the physiological basis of this pathology?
c) Which medicines can alleviate the patient's symptoms?

Q5.A) List the neuromuscular blocking drugs? Explain the mechanism of action of at least one drug in detail? (2)
B) Define the following terms: (3)

a) Chronaxie
b) Motor unit
c) Refractory period

Q6. Write down the differences between the skeletal, smooth and cardiac muscles? (at least ten points) (5)

Date: 29-Mar-2018

Aziz Fatima Medical College
Department of Biochemistry
1st Year MBBS

Test on Lipids

Time Duration:
Time: 45 Minutes

Question 1.
(A). What are lipids? Classify them with one example from each class. (3)
(B). What is the effect of unsaturation on the melting point of fatty acids. (2)
(C). Name primary & secondary bile acids with their sites of synthesis.

Question 2.
(A). What are eicosanoids? Give the names of their precursors, name cyclic and non cyclic eicosanoids. (4)
(B). Enumerate functions of prostaglandins & Thromboxanes. (3)

Question 3.
(A). A neonate died soon after birth due to severe respiratory depression. He was diagnosed as a case of Respiratory distress syndrome (RDS). (3)
(i). What deficiency causes this syndrome. (3)
(ii). What is the chemical nature and physiological functions of this compound. (2)
(iii). Why death has occurred in this neonate. (3)

Question 4.
(A). Name Ketone bodies, what are the reasons for ketoacidosis. (2)
(B). Differentiate with examples (2)
(i). Saturated and unsaturated fatty acids.
(ii). Essential and non essential fatty acids.

Question 5.
(A). What are lipoproteins? Classify them on the basis of density, give composition of (3)
diglycerides.
(B). What are ceramides? Differentiate between gangliosides and cerebrosides, mention their (4)
physiological functions.

Question 6.
(A). What are steroids? Enumerate different compounds formed from cholesterol. (4)
(B). How cotton seed oil is converted to fat? (3)

Question 7.
(A). Rancidity of Fat.
(B). Biological role of Phosphoinositol.

DEPARTMENT OF BIOCHEMISTRY

Roll No.: _____

CLASS TEST ON ENZYMES - 2017
FIRST YEAR MBBS PART I – MCQs

Marks obtained: _____

Total marks: 30
Time Allowed: 20 minutes

Select one best answer

1 **Enzymes**
(a) Are used up in the reaction
(b) Inhibit a reaction
(c) Increase the energy of activation
(d) Are biological catalysts
(e) Make ATP

2 **Enzymes are mostly**
(a) Protein in nature
(b) Lipids
(c) Carbohydrates
(d) Metal ions
(e) None of the above

3 **Enzymes lower the activation energy**
(a) By altering the thermodynamics of reaction
(b) Without altering the thermodynamics of reaction
(c) By absorbing the energy
(d) By release of energy
(e) Both (c) & (d) are correct

4 **The substance upon which an enzyme acts, is called**
(a) Catalyst
(b) Protein
(c) Product
(d) Substrate
(e) Coenzyme

5 **Enzymes are**
(a) Heat stable
(b) Heat labile
(c) Are not affected by heat
(d) Only work above 40°C
(e) None of the above is true

6 **Enzymes are**
(a) Strictly protein in nature
(b) May also contain a non-protein part
(c) Are also called ribozymes
(d) Are called apoenzymes
(e) All of the above are correct

7 **Apoenzyme is**
(a) The enzyme as a whole
(b) Is ribozyme
(c) The protein part of the enzyme
(d) The non-protein part of enzyme
(e) Is a prosthetic group

8 **Holoenzyme is**
(a) Apoenzyme + prosthetic group
(b) Apoenzyme + protein part of enzyme
(c) Coenzyme + prosthetic group
(d) Coenzyme + metal ion
(e) Enzyme with RNA molecules

9 **Enzymes having more than one polypeptide chain are called as**
(a) Monomeric enzymes
(b) Multi-enzyme complex
(c) Oligomeric enzymes
(d) Coenzymes
(e) Ribozymes

10 **When active form of enzyme acts on zymogen catalyzing its conversion into active form, the process is called**
(a) Biological catalysis
(b) Proenzyme
(c) Autocatalysis
(d) Enzyme inhibition
(e) Denaturation of enzyme

11 **Enzymes are grouped into**
(a) 3 major classes
(b) 4 major classes
(c) 5 major classes
(d) 6 major classes
(e) 2 major groups

12 **Coenzymes are**
(a) Also called Holoenzyme
(b) Are heat labile
(c) Are heat stable
(d) Are proteins in nature
(e) None of the above

13 **Hydrolases**
(a) Break the bond by adding water
(b) Break the bond by removing water
(c) Make a bond by adding water
(d) Make a bond by removing water
(e) Only act on milk

14 **Lyases act by**
(a) Joining two substrate by a covalent bond
(b) Breaking a bond by adding water
(c) Breaking a bond by removing water
(d) Break bonds by mechanism other than hydrolysis
(e) Must have metal ion in it

28-03-2014

DEPARTMENT OF BIOCHEMISTRY

1ST YEAR MBBS 2014
TEST ON PROTEINS & LIPIDS

TIME: 45 MINUTES
MARKS: 40

QUESTION NO. 1

(a) Define and classify lipids with one example from each class. (3)
(b) Name essential fatty acids; also mention number of carbon atoms and position of double bonds. (3)

QUESTION NO. 2

(a) What are lipoproteins? Give composition and site of synthesis of chylomicrons (3)
(b) What are primary and secondary bile acids? Mention their sites of synthesis and biological functions (4)

QUESTION NO. 3

(a) What are eicosanoids? Name cyclic and non cyclic eicosanoids, enumerate physiological functions of prostaglandins. (3)
(b) What are ceramides? Differentiate between cerebrosides and gangliosides. Mention their physiological functions (4)

QUESTION NO. 4

(a) Write a short note on secondary structure of proteins. (4)
(b) What are essential, non standard and modified amino acids explain with examples (3)

QUESTION NO. 5

(a) Classify proteins on functional basis with one example from each class (3)
(b) Compare and contrast myoglobin and hemoglobin. (4)

QUESTION NO. 6

(a) What are free radicals, how these are generated in the body? Mention their physiological role (3)
(b) Draw the structure of steroid nucleus, mention the physiological importance of cholesterol. (3)

MBBS 1st Year

Test on Cell & Physicochemical Aspects

31-01-2014

Marks: 50

Roll No: _____

Time Allowed: 45 min.

Provide appropriate answers to the following statement (MCQ'S) (1.5 * 20 = 30)

1: The most abundant element in life is:
- A. Nitrogen
- B. Oxygen
- C. Hydrogen
- D. Carbon

2: Ribosomes are concerned with the synthesis of:
- A. Proteins
- B. Carbohydrates
- C. Lipids
- D. tRNA

3: Most effective buffer of the blood plasma qualitatively is
- A. Bicarbonate buffer
- B. Hb buffer
- C. Plasma proteins
- D. Acetate buffer

4: In dialysis, colloids (proteins) are separated from crystalloids on the basis of
- A. Charge
- B. Molecular Size
- C. Solubility
- D. Dialysis coefficient

5: Adsorption varies inversely with the
- A. Temperature
- B. Pressure
- C. Humidity
- D. pH

6: Viscosity of a solution increases with increase in
- A. Number of cells in liquid
- B. pH
- C. Humidity
- D. Temperature

7: Glycosylated proteins synthesized for plasma membranes of intracellular organelles occur in:
- A. Lysosomes
- B. Rough endoplasmic reticulum
- C. Smooth endoplasmic reticulum
- D. Golgi apparatus

8: The pCO_2 is always reduced in:
- A. Repiratory alkalosis
- B. Metabolic alkalosis
- C. Respiratory acidosis
- D. Metabolic acidosis

9: Osmotic pressure in directly proportional to the:
- A. Concentration of solvent
- B. Permeability of membrane
- C. Concentration of water
- D. Concentration of solute

10: Surface tension is lowered by the following except
- A. Soaps
- B. Bile salts
- C. $KMnO_4$
- D. NaCl

11: Water has maximum density at:
- A. 0°C
- B. 1°C
- C. 100°C
- D. 4°C

12: In diabetes mellitus specific gravity of the blood is
- A. Increased
- B. Decreased
- C. Fixed
- D. None of the above

13: Specific Gravity Of Blood is
- A. 1.001
- B. 1.056
- C. 1.005
- D. 2.056

14: Normal pH value of blood is
- A. 6.35 — 6.45
- B. 7.0 — 7.2
- C. 7.5 — 7.8
- D. 7.35 — 7.45

15: All of the following are associated with metabolic alkalosis except
- A. Ingestion of NH_4Cl
- B. Loss of HCL
- C. Diuretic therapy
- D. Pyloric obstruction

16: High concentration of hydrolases (catalytic enzymes) are present in
- A. Nucleus
- B. Nucleolus
- C. Ribosomes
- D. Lysosomes

17: Plasma oncotic pressure is due to pressure exerted by
- A. Glucose
- B. Chloride ions
- C. Sodium ions
- D. Proteins

18: : Citric acid cycle and β oxidation of fatty acids which are major sources of energy production occur in:
- A. Mitochondria
- B. Ribosome
- C. Golgi apparatus
- D. Lysosomes

19: In alkaline solutions
- A. $(OH^-) = (H^+)$
- B. $(OH) < (H^+)$
- C. $H^+ = H^+$
- D. $(OH^-) > (H^+)$

20: Following conditions can cause dehydration except:
- A. Prolonged Vomiting
- B. Severe diarrhoea
- C. Intake of ORS
- D. Excessive sweating

ALLAMA IQBAL MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1ST YEAR MBBS 2018-19

3RD MODULE TEST: Blood & Immunity

SEQs (SHORT EASY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 22-05-2019

~~TIME: 60 MINS~~
~~TIME: 1 hr 30 min~~

Q1. A) Define anemia. Classify the different types of anemia? (3+2+5)
B) Explain in detail the complete blood picture along with indices in case of megaloblastic anemia anemia?
C) Enumerate the different stages of Erythropoiesis & enlist all the factors regulating red blood cell production?

Q2. A) Define inflammation? Explain in detail the different line of defenses during inflammation? (3+3)
B) Describe the mechanism of cellular immunity in detail?
C) A 25 year old boy came in the emergency department with high grade fever, shivering & sore throat. (1+1+2)
Complete blood examination was done showing TLC= 15000 mm^3, ESR= 50 & Hb= 14gm/dl
i. What is the most likely cause of this condition?
ii. What are the substances released in inflammation that cause increased WBC count?
iii. What is the composition of pus?

Q3. A) Give an account of role of Helper T cells in Active immunity? (3+3+4)
B) Draw structure of antibody and enlist the methods of killing of bacteria by the antibodies?
C) Define allergy. Enlist all of its types with the help of examples.

Q4. A) Define homeostasis and enlist the main steps involved in hemostasis?
B) A 16 year old boy was brought to the emergency department with severe abdominal pain. (3+1+2+2)
An acute appendicitis was diagnosed and immediate surgery was advised.
i. Which clotting mechanism will be involved in blood coagulation during surgery?
ii. Give the mechanism of clotting involved in the above scenario in cascade form?
iii. Which investigation should be done before the surgical procedure regarding the hemophilic profile?
C) Describe the fibrinolytic system of blood clotting? (3+3

Q5. A) Enlist the transfusion reactions in case of mismatch blood transfusion?
B) Define Rh incompatibility. What disturbances may be present in the newborn suffering from erythroblastosis fetalis?
C) Which type of blood groups are called Universal donor and universal recipient & why? (2+2+2

Qn. Define the following:
i. Polycythemia
ii. Purpura
iii. Hemophilia
iv. Thpurra
v. Leukemia

Test, Respiration Physiology, MBBS 2011-16
Department of Physiology

Respiration

6

SEQs (SHORT EASSY TYPE QUESTIONS)

ATTEMPT ALL QUESTIONS — TIME= 40
ALL QUESTIONS CARRY EQUAL MARKS — MARKS= 30

Q.1 (a) Draw and label O2 – Hb curve — 3 marks
(b) Enlist the factors shifting the curve to right — 2 marks

Q.2 Describe in detail the chemical control of respiration. — 5 marks

Q.3 (a) Give an account of the mechanism of inspiration. — 3 marks
(b) Define hypoxia, Mention briefly the hypoxic hypoxia. — 2 marks

Q.4 (a) Draw and label the respiratory membrane — 2.5 marks
(b) Name the factors affecting the diffusion of gases. — 2.5marks

Q.5 Define and explain the following terms
(a) Haldane's effects. — 2marks
(b) Hamburger phenomena — 2marks
(c) Cyanosis — 1marks

Q.6 Define compliance. Explain it with help of compliance graph. List the factors on which it depends. — 5 marks

Zohaib

...ERA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

...D MODULAR TEST: Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 20
TIME = 30mins

DATED: 07-05-2019

Q1. A 30 year old man came to emergency department with high grade fever (102° F), cough and pain on swallowing. On examination, he has large & swollen tonsils (inflammation of tonsils). Complete blood picture was ordered immediately. (1+4)

I. Which type of leucocytes will be increased in this condition?
II. Classify WBC's. Give one function of each type of cell?

Q2. A) Define inflammation? Explain in detail the different lines of defense in inflammation. (3+2)

B) Describe in detail the bilirubin cycle?

Q3. A) Enumerate the different stages of Erythropoisis? (2.5+2.5)

B) Explain the mechanism of regulation of red blood cell production?

Q4. A) Define anemia. Classify the different types of anemia? (1+2+2)

B) Explain in detail the complete blood picture in case of iron deficiency anemia?

12- A 40 year old man was found unconscious in his garage with his car engine still running. He was rushed to the emergency where his ABGs (arterial blood gases) were done, which revealed normal PO_2 but decreased oxygen saturation. Which of the following is the most probable cause?
A. Carbonmonoxide poisoning
B. Anemia
C. Carbondioxide poisoning
D. Decreased ventilation
E. Pulmonary thromboembolism

13- The pacemaker neurons responsible for generation of respiratory rhythm are located in which of the following region?
A. Apneustic center
B. Pneumotaxic center
C. Inspiratory neurons in dorsal respiratory group
D. Central chemoreceptors in medulla
E. Pre-Botzinger complex in the medulla

14- A 30 year old male is admitted to hospital with chest wall deformity and weakness of respiratory muscles showing restrictive pattern of disease. Which of the following variable will most likely be DECREASED in this patient?
A. Alveolar surface tension
B. Airway resistance
C. Chest wall compliance
D. PCO_2 in arterial blood
E. Blood flow to the lungs

15- A 40 year old woman known case of asthma presents to the emergency department with severe shortness of breath. She experiences an acute attack of asthma as she lost her bronchodilator inhaler the previous day. In asthma airway resistance is greater when?
A. There is laminar air flow compared to turbulent flow
B. There is lower value of Reynolds number
C. During inspiration compared to expiration
D. In the smaller airways compared to larger airways
E. In larger airways compared to smaller airways

6- A 30 year old pregnant female suffered from a road traffic accident. Emergency C-section was performed and the baby was delivered preterm (28 weeks). Pre term babies have surfactant deficiency, which cause the alveoli to collapse and result in a respiratory failure. Which of the following statement is correct about the changes present in the pre term baby compared to normal baby?
A. Decreased surface tension & lung compliance
B. Decreased surface tension & increased compliance
C. Increased surface tension & increased compliance
D. Increased surface tension & no change in lung compliance
E. Increased surface tension & decreased lung compliance

Which of the following factor cause stimulation of ventilation before the beginning of exercise (anticipatory changes)?
A. Collateral impulses to the brain stem from higher brain center
B. Partial pressure of oxygen
C. Partial pressure of CO_2
D. Decreased pH
E. Increased pH

18- During exercise the O_2-Hb dissociation curve shifted right & downwards. Which statement regarding this shift is correct?
A. P_{50} is increased
B. P_{50} is decreased
C. Affinity of oxygen to Hb is increased
D. Oxygen carrying capacity of Hb is
E. Impaired ability to unload oxygen to

19- Which of the following statement is true regarding chemical control of respiration?
A. CO2 directly stimulates the chemosensitive area in brain
B. O2 concentration greatly stimulates the chemosensitive area in brain
C. Hydrogen ions directly stimulates the chemosensitive area in brain
D. PCO2 stimulates the chemosensitive area by stimulating peripheral chemoreceptors
E. Hydrogen ions stimulate the chemosensitive area by stimulating peripheral chemoreceptors

20- Which of the following statement is true regarding the FEV1/FVC ratio?
A. The ratio for normal lung is 50%
B. The ratio in airway obstruction is increased above the normal value
C. The ratio in obstructive disease is decreased below normal value
D. In restrictive disease the ratio is decreased.
E. The ratio cannot be measured by spirometer.

21- Regarding vapor pressure which of the following statement is true?
A. It is added from the surface alveoli
B. It is only added when inspired air is dry
C. 47mmHg of pressure is added to inspired air
D. It does not humidify the inspired air
E. It does not dilute the gasses in inspired air

22- In alveolar capillaries the oxygen saturation of Hb is 100% but this saturation falls to 97% when the blood reaches the left atrium. What is the probable cause?
A. Some of the oxygen is consumed by the walls of pulmonary veins
B. Admixture of bronchial and pulmonary capillary blood
C. CO2 in the expired air decreases the saturation
D. Oxygen is consumed by the lung alveoli.
E. Some of the alveoli have physiological shunt

23- Which of the following is true regarding the transport of CO2?
A. 70% of CO2 circulates as carbamino compound
B. The venous partial pressure of CO2 is 45mmHg
C. The concentration of CO2 in volume% in venous blood is 48%
D. CO2 does not dissolve in fluid part of blood
E. CO2 is highly soluble and 100% of it is transported by dissolving in plasma

24- In SA node the pacemaker potential is because of
A. Increased leakiness of Na ions in pacemaker cells
B. An increase in K+ conductance in pacemaker cells
C. A decrease in Ca++ conductance in pacemaker cells
D. A decrease in Cl- conductance in pacemaker cells
E. Increased conductance of Na ions because of opening of Na fast channels

25- A 60 year old man reports several episodes of syncope (loss of consciousness). An electrocardiogram is performed showing dissociation between P waves and QRS complexes. Which of the following is commonly associated with syncope?
A. Sinus tachycardia
B. First degree heart block
C. Second degree heart block
D. Third degree heart block
E. Sinus bradycardia

26- Which phase of cardiac cycle follow immediately the beginning of QRS wave?
A. Iso volumic relaxation
B. Ventricular ejection
C. Atrial systole
D. Isovolumic contraction
E. Diastasis

27- A 20 year old man [illegible] evaluation. An [illegible] diastolic murmur [illegible] border [illegible] diastolic murmur

9. **Which of the following is the fastest conducting nerve fiber?**
   - A. Type C fiber
   - B. A alpha fiber
   - C. A beta fiber
   - D. A gamma fiber
   - E. Type B fiber

10. **Which of the following is the true action potential and able to propagate?**
   - A. Motor endplate potential
   - B. Excitatory post synaptic potential
   - C. Inhibitory post synaptic potential
   - D. Spike potential
   - E. Miniature end plate potential

11. **Which of the following sequence of events is correct for excitation- contraction coupling in skeletal muscle?**
   - A. Increased intracellular Ca^{++} → action potential in muscle membrane → cross- bridge formation.
   - B. Action potential in muscle membrane → depolarization of T tubules→ release of Ca^{++} from sarcoplasmic reticulum
   - C. Action potential in the muscle membrane→ splitting of ATP→ binding of Ca^{++} to troponin C.
   - D. Release of Ca^{++} from sarcoplasmic reticulum→ depolarization of T tubules→ binding of Ca^{++} to troponin C.
   - E. Release of Ca^{++} from sarcoplasmic reticulum→ binding of Ca^{++} to troponinC → depolarization of T tubules.

12. **Regarding T tubules which of the following statement is correct**
   - A. Contain a voltage- sensitive protein called ryanodine receptor.
   - B. Are located at the H- zone
   - C. Forms dyad with the tubule of sarcoplasmic reticulum in skeletal muscles
   - D. Opens to the extracellular space and carries the depolarization to the interior of the cell
   - E. Two T tubules and the terminal cisternae of the sarcoplasmic reticulum forms a triad arrangement.

13. **A 30 year old man having an anxiety attack collapses. The rescue 15 personal that arrived on the scene notes that he is hyperventilating and having severe muscle contraction. He suspects that he is suffering from tetany. Decrease in the concentration of which of the following substances will cause tetany.**
   - A. Ca^{2+}
   - B. Na^{+}
   - C. Adenosine triposphate (ATP)
   - D. Troponin
   - E. Calmodulin

14. **Which of the following causes rigor mortis in skeletal muscles?**
   - A. An increase in the intracellular calcium levels
   - B. A decrease in the intracellular calcium levels
   - C. An increase in the ATP levels
   - D. A decrease in the ATP levels
   - E. No action potential in motor neurons

15. **Which characteristic component is shared by skeletal muscle and smooth muscle?**
   - A. Thick & thin filaments arranged in sarcomeres
   - B. Troponin
   - C. Elevation of intracellular Ca^{++}
   - D. Spontaneous depolarization of the membrane potential
   - E. Gap junctions between the cells

16. **Which of the following is a neuromuscular junction blocker?**
   - A. Neostigmine
   - B. Diisopropyl fluorophosphate
   - C. Physostigmine
   - D. Curariform drugs
   - E. Acetylecholine esterase enzyme

17. **At what membrane voltage does the voltage gated Na^{+} channels become activated to the firing level?**
   - A. -90mV
   - B. -65mV
   - C. 0mV
   - D. -65V
   - E. +35mV

18. **Which of the following decreases in length during the contraction of skeletal muscle fiber?**
   - A. I band of the sarcomere
   - B. A band of the sarcomere
   - C. Thick filament
   - D. Thin filament
   - E. Z discs of the sarcomere

19. **A 30 year old man got into a road side accident and got his right sciatic nerve sectioned just above the knee. He would be suffering from all of the following except.**
   - A. Loss of sensation in distal part of limb
   - B. Loss of voluntary movement in distal limb
   - C. Loss of ankle reflex
   - D. Loss of sweating in lower limb area
   - E. Hypertrophy of the right foot muscle

20. **What happens to the excitable tissue cells in extreme hyperkalemia?**
   - A. The membrane becomes more excitable
   - B. The membrane becomes hypopolarized
   - C. The membrane becomes more negative
   - D. The membrane becomes gradually less negative & RMP vanishes ultimately leading to death
   - E. Membrane becomes hyperpolarized

NAHEED MEDICAL COLLEGE LAHORE

MBBS 2013-14 (Physiology)

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks: 20
Select Single best answer

...ect of inflammation?

A. Prothrombin
B. Albumin
C. Fibrinogen
D. γ Globulin
E. α Globulin

Q2. Serum differs from plasma in lacking:

A. Albumin
B. Fibrinogen
C. Globulin
D. Ferritin
E. Apoferritin

Q3. Which are the most abundant of all the cells of the blood?

A. Lymphocytes
B. Neutrophils
C. Monocytes
D. Platelets
E. Red blood cells

Q4. The following cell is devoid of the hemoglobin:

A. Erythrocyte
B. Reticulocyte
C. Intermediate normoblast
D. Late normoblast
E. Pronormoblast

Q5. Maturation of erythroblasts involves:

A. Increase in size of cell
B. Condensation of chromosomes in nucleus
C. Accumulation of hemoglobin
D. Pyknosis of nucleus
E. Breakage of cell membrane

Q6. The oxygen and carbon dioxide exchange in RBCs is maximum with the following configuration of red cell:

A. Spherical
B. Oval
C. Triangular
D. Rectangular
E. ...

A. Sesamoid bones
B. Shafts of long bones
C. Lower ends of the long bones
D. Membranous bones
E. Phalangeal bones

Q8. Fe in the liver parenchymal cells is stored in the form of:

A. Apoferritin
B. Transferrin
C. Hemosiderine
D. Ferritin
E. Hemochromatin

Q9. The protein responsible for iron transport in plasma is:

A. α 1-anti trypsin
B. Ferritin
C. Apo-transferrin
D. Apo-ferritin
E. Ceruloplasmin

Q10. The erythropoietin level in the blood of the following will be high:

A. Olympic marathon runner
B. End stage renal disease
C. Polycythemia vera
D. Aplastic anemia
E. Leukemia

Q11. A 24 year old African American man comes to the emergency room 3 hours after the onset of severe back and chest pain which started when he was climbing up a mountain. He had an episode of same symptoms five years ago. His values are Hb: 11g/dL, TLC: 12,000/mm³, Reticulocyte count: 25%. What is the diagnosis of this patient?

A. Acute blood loss
B. Sickle cell anemia
C. Anemia of chronic disease
D. End stage kidney disease
E. Chronic blood loss

...generating a normal antibody response.
B. They have increased helper T cells.
C. They have increased secretions of inter-leukins.
D. They have decreased helper T cells.
E. They have decreased red blood cells.

Q13. The actively phagocytic cell in the blood stream is:

A. Basophil
B. Neutrophil
C. Eosinophil
D. Lymphocyte
E. Monocyte

Q14. Combination of monocyte's mobile macrophages, fixed tissue macrophage, and a few specialized endothelial cells in the bone marrow, spleen and lymph nodes is called:

A. Complement system
B. Coagulation system
C. Immune system
D. Monocyte macrophage system
E. Lymphatic system

Q15. What happens following the presentation of an antigen by a macrophage?

A. Direct generation of antibodies
B. Activation of cytotoxic T cells
C. Increase in phagocytosis
D. Activation of helper T cells
E. Activation of platelets

Q16. Bluish tint of the polycythemia person is because of excess of:

A. Myoglobin
B. Deoxygenated Hb
C. Oxygenated Hb
D. Reduced Hb
E. Sulphated Hb

...muscle is approxima...
...in skeletal muscle.

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2015-16

UNIT TEST: Respiration

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 30
TIME = 40min

DATED: 08 -08-2016

QNo.1 A) Name the muscles of inspiration during quite normal and forced breathing? (2)
B) Discuss mechanism of inspiration with special reference to the pressures?

QNo.2 A) Define the compliance of lungs? Outline the factors on which it depends?
B) Define dead space. Give its types and functions?

QNo.3 A) Define respiratory unit. List the layers of respiratory membrane? (2)
B) Discuss the factors effecting diffusion of gases across respiratory membrane? (3)

QNo.4. A) Draw and label O2-Hb dissociation curve? Discuss the buffer role of Hb correlating with the transport of O2. (4)
B) What is P50? (1)

QNo.5 A) Define Ventilation/Perfusion (V/Q) ratio. What happens to V/Q ratio in Chronic Obstructive Pulmonary Diseases? (2)
B) What are inspiratory ramp signals, from where they are emitted and discuss their important characteristics?

QNo.6 A) Enumerate the changes which take place during acclimatization at high altitude? (At least six changes) (3)
B) A deep sea diver was working for 1 hour at a depth of 200 feet under the sea. Suddenly he saw a shark and rushed to the sea surface.

i) What problem can develop due to this sudden environmental change? (0.5)
ii) Briefly mention the features and treatment of this condition (1.5)

Q.6(A). Hyperpnea
2. Heart rate ↑
3. Stroke volume ↓
4. Improper digestion
5. Polycythemia ↑
6. RBCs ↑
7. Myoglobin ↑
8. Mitochondria ↑
9. ↓ lactate production

Marks: 30
Time: 20 Minutes

Azra Naheed Medical College, Lahore.

Roll # _____

PAPER # 2, BIOCHEMISTRY (1st Professional MBBS Part I)

MCQ's

Choose one best answer.

1: Sucrose on hydrolysis yields:
- a. Galactose and Mannnose
- b. Glucose and Galactose
- c. ✓ Galactose and Fructose
- d. Glucose and Fructose
- e. Fructose and Mannose

2: α – D – Glucose and β – D – Glucose are:
- a. ✓ Anomer
- b. Epimer
- c. Polymer
- d. Diastereoisomer
- e. None of the above is true

3: Anticoagulant properties are shown by:
- a. Hyaluronic acid
- b. ✓ Chondrotin sulphate
- c. Heparin
- d. Amylopectin
- e. None of the above is true

4: Hydrolysis of which of the following sugars is called inversion:
- a. Maltose
- b. Lactose
- c. ✓ Sucrose
- d. Galactose
- e. Glucose

5: Which of the following amino acids contain sulphur:
- a. Glycine and Alanine
- b. ✓ Cysteine and Methione
- c. Tyrosine and Phenyl alanine
- d. Lysine and Arginine
- e. Serine and Threonine

6: Which of the followeg is a basic amino acid:
- a. Glycine
- b. Alanine
- c. ✓ Arginine
- d. Serine
- e. Threonine

7: Which of the following eicosanoids is vasoconstrictor:
- a. Prostacyclin
- b. ✓ Prostaglandin E
- c. Thromboxane
- d. All of the above are true
- e. None of the above is true

8: Myoglubin is an example of:
- a. Primary structure of proteins
- b. ✓ Secondary structure of proteins
- c. Tertiary structure of proteins
- d. Quaternary structure of proteins
- e. None of the above is true

9: Km is:
- a. Concentration of enzyme
- b. Concentration of product
- c. ✓ Michaelis Menten constant
- d. All of the above are true
- e. None of the above is true

10: Which of the following statement about cell membrane is incorrect:
- a. ✓ It is impermeable to fat soluble vitamins
- b. It contains lipid bilayer
- c. May contain glycoprotein molecules
- d. May contains ion channels
- e. May contain receptor proteins

11: The bonds maintaing primary structure of proteins are:
- a. Phosphodiester bonds
- b. Ionic bonds
- c. Hydrogen bonds
- d. Hydrophobic interactions
- e. ✓ Covalent bonds

12: Lecithin and cephalins are:
- a. sphingophospholipids
- b. sphingoglycolipids
- c. ✓ glycerophospholipids
- d. Ceramide
- e. Steroid

13: Adenine and guanine are:
- a. ✓ Purine bases
- b. pyrimidine bases
- c. Both purine and pyrimidine bases
- d. All of the above are true
- e. None of the above is true

14: A nucleotide is composed of:
- a. Ribose sugar and fatty acid
- b. Phosphoric acid and nitrogenous base
- c. Ribose sugar and phosphate
- d. Nitrogenous base and glucose
- e. ✓ Ribose sugar, phosphate and Nitrogenous base

15: Gluconic acid has COOH group at:
- a. ✓ Carbon no. 6
- b. Carbon no. 1
- c. Both at carbon no. 1 and carbon no. 6
- d. All of the above is true
- e. None of the above is true

16: Milk is deficient in:
- a. Sodium
- b. Phosphorous
- c. Potassium
- d. ✓ Calcium
- e. Iron

17: Deficiency of thiamine may cause:
- a. Scurvy
- b. Pallagra
- c. Rickets
- d. Night blindness
- e. ✓ Beri Beri

18: FAD is a coenzyme of:
- a. Folic acid
- b. Niacin
- c. Thiamine
- d. ✓ Riboflavin
- e. Biotin

19: Which of the following is a primary bile acid:
- a. Litho cholic acid
- b. ✓ Cholic acid
- c. Deoxy cholic acid
- d. Bilirubin
- e. Biliverdin

20: The precursors for biosynthesis of heme are:
- a. ✓ Succinyl-SCoA & glycine
- b. Pyruvate and acetyl-SCoA
- c. Arachidonic acid & aspatate
- d. Tyrosine & succinyl- SCoA
- e. Malonyl-SCoA and citrate

21: Ornithine & Citrulline are:
- a. Neutral amino acid
- b. Aromatic amino acid
- c. ✓ non standard amino acid
- d. modified amino acid
- e. sulphur containing amino acids

22: Heparin is a:
- a. Monosaccharide
- b. Disaccharide
- c. Oligosaccharide
- d. ✓ Heteropolysaccharide
- e. Homopolysaccharide

P.T.O

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

UNIT TEST; CELL PHYSIOLOGY

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 18-12-2017

MARKS= 30
TIME = 40min

Q1- A) Define "Control system" of the body? What are the different components of control system?
B) Outline different mechanisms of control system functioning? (1.5+1+2.5)
C) Give comparison of feed forward and feed back mechanism?

Q2- A) Draw and label the "fluid mosaic model" of cell membrane?
B) Describe the different functions of cell membrane proteins? (2.5+2.5)

Q3- A) Describe the structure and functions of mitochondria?
B) Name the different components of cytoskeleton & describe their functions? (2.5+2.5)

Q4- Define gene expression? Discuss the important steps of translation? (1 + 4)

Q5- Outline the different mechanisms of genetic regulation? (5)

Q6- Define the following? (2+1+1+1)

i. Compare between apoptosis & necrosis
ii. Micro RNA
iii. Gain of system
iv. Histone proteins

→ PP which is required to keep Hb 50% saturated.

AZRA NAHEED MEDICAL COLLEGE LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2016-17

UNIT TEST; Respiration

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

MARKS= 30
TIME = 40min

DATED: 09-08-2017

Q1. A) Explain the mechanism of inspiration & expiration with special emphasis on changes in respiratory pressure & muscles involved? F#128 (5)

Q2. A) Draw O2-Hb dissociation curve. G#530 (2+2+1)
B) What do you understand the rightward shift of the curve? Enlist the factors causing right shift of curve? pg 139
C) Define P50? It is correlation b/w partial pressure and 50% saturation of Hb.

Q3. A) Define dead space? What are its types? Outline the functions of dead space? (3+2) F133 & N-4
B) Define Ventilation/ Perfusion ratio? What is the normal value of Va/Q? Mention any two conditions in which it becomes abnormal? F137 destructive pulmonary disease. restrictive pulmonary disease. G#499

Q4. A) Define compliance of the lungs, Draw hysterosis loop diagram & mention important factors on which compliance depends? G-499 (3+2)
B) Define Functional residual capacity (FRC)? What is its normal value & briefly mention the method to find it? G502, 503

Q5. A) List the different means of transport of CO_2 in blood? F139. (3+2)
B) Define Bohr's effect & Heldane effect?
F139 F140

Q6. A) A 30 year old scuba diver remains beneath the sea for about 4-5 hours and was breathing compressed air. He quickly ascends to the surface of the sea and develops severe pains in his body, joints along with the breathlessness & dizziness (1+1+0.5)
i. Diagnose the disease
ii. What pathophysiology underlies this disease? Decompression sickness / Caisson Disease
iii. How this condition can be prevented? F144-145

B) What are peripheral chemoreceptors? Give their location & what is the most potent stimulus of these receptors? G542 F141 (2.5) CO_2 & H_2

Fundions of Dead Space:-
1) Cough Reflex
2) Sneez Reflex
3) Regulation of Temperature
4) Stimulation or Synthesis of ACE enzyme
5) Entrapment of foreign particles. (Angiotensin converting enzyme)
6) To filter dust particles
7) Acid. Base Blance.

- A 30 year old woman recently gave birth to he second child by cesarean dilevery. She is now experiencing both urinary and fecal incontinence during straining maneuvers. A pudendal nerve conduction test indicates that the pudendal nerve (carrying voluntary motor signals) is the cause of fecal incontinence. Which sphincter is most likely affected?

A. Pyloric
B. Ileocecal
C. Rectosigmoid
D. Internal anal
E. External anal

due to damage of cerebral
opposite side of body muscles are
during recovery period, what will happen

Hypotonia
Cogwheel Rigidity
Clasp knife rigidity (C)
Decerebrate rigidity (less tone)
Lead pipe rigidity

excessive muscle tone produced in
ete rigidity is due to
Overactivity of Medullary reticular nuclei.
Overactivity of Pontine reticular Nuclei
ncreased input from cerebral cortex to
Medullary nuclei
ncreased input from thalamus
ncreased input from red nuclei
atient who presents with an intention
"past pointing" and a drunken gait might
ted to have a lesion involving the
Cerebellum
Medulla
ortical motor area
asal ganglia
rventh Cranial nerve

longed action potential or complex spike is
due to stimulation of which fibers of
n
imbing fibers
assy fibers
arallel nerve fibers
oth climbing & mossy fibers
nly Mossy fibers

Purkinji cells of cerebellum
cite the stellate & basket cells
and Inhibitory impulses to deep cerebellar
clei
ve rise to parallel fibers
ischarge complex spike in response to mossy
bers
scharge at the rate of 5 to 10 action potential
r second

5 years old man develops tremors in
The tremors are more prominent when he
or his coffee cup or points to an
ich component of motor system is

sal ganglia
ebellar hemisphere
ebellar vermis
lar nuclei of thalamus
tor cerebral cortex

Q17. The primary function of Basal ganglia especially ,of caudate nucleus is
A. Sensory integration
B. Short term memory
C. Cognitive control of motor activity (planning of movement)
D. Control of equilibrium
E. Control of position

Q18. Hemiballismus occurring in one of the left half of body results from lesion in
A. Caudate Nucleus
B. Putamen
C. Amygdaloid body
D. Subthalamic nucleus
E. Globus pallidus

Q19. The rigidity seen in Parkinsonism is due to excessive stimulation of alpha motor neurons of all the muscles results due to
A. Inhibitory effect of Basal ganglia
B. Absence of inhibitory effect of Basal ganglia on motor Cortex
C. Hypofunction of motor cortex
D. Absence of cerebellar inhibition
E. Increased sensitivity of stretch reflex

Q20. Which statements about Cerebrospinal fluid is false?
A. Is produced by choroid plexus
B. Is produced at the rate of 500 ml /day
C. Secretion involves active transport of Na+
D. Secretion involves active transport of K+
E. The normal pressure in CSF is 10 mm of Hg when one is lying in horizontal position

1. B	6. C
2. B	7. C
3. B	8. E
4. B	9. B
5. C	10. B
11. C	16. B
12. B	17. C
13. A	18. D
14. A	19. B
15. B	

...SHEED MEDICAL COLLEGE, LAHORE

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2018-19

TEST: Blood & Immunity

SEQs (SHORT EASSY TYPE QUESTIONS)
ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

DATED: 22-05-2019

MARKS= 60
TIME = 1 hr 10 min

Q1. A) Define anemia. Classify the different types of anemia? (3+2+5)
B) Explain in detail the complete blood picture along with indices in case of megaloblastic anemia anemia?
C) Enumerate the different stages of Erythropoisis & enlist all the factors regulating red blood cell production?

Q2. A) Define inflammation? Explain in detail the different line of defenses during inflammation? (3+3)
B) Describe the mechanism of cellular immunity in detail?
C) A 25 year old boy came to the emergency department with high grade fever, shivering & sore throat. (1+1+2)
Complete blood examination was done showing TLC= 15000/mm^3, ESR= 50 & Hb= 14gm/dl
I. What is the most likely cause of this condition?
II. What are the substances released in inflammation that cause increased WBC count?
III. What is the composition of pus?

Q3. A) Give an account of role of Helper T cells in Active immunity? (3+3+4)
B) Draw structure of antibody and enlist the methods of killing of bacteria by the antibodies?
C) Define allergy. Enlist all of its types with the help of examples.

Q4. A) Define hemostasis and enlist the main steps involved in hemostasis?
B) A 14 year old boy was brought to the emergency department with severe abdominal pain. (3+1+2+2+2)
An acute appendicitis was diagnosed and immediate surgery was advised.
I. Which clotting mechanism will be involved in blood coagulation during surgery?
II. Give the mechanism of clotting involved in the above seenerio in cascade form?
III. Which investigation should be done before the surgical procedure regarding the hemophilic profile?
C) Describe the fibrinolytic system of blood clotting?

Q5. A) Enlist the transfusion reactions in case of mismatch blood transfusion? (3+3+4)
B) Define Rh incompatibility. What disturbances may be present in the newborn suffering from erythroblastosis fetalis?
C) Which type of blood groups are called Universal donor and universal recipient & why?

Q6. Define the following: (2+2+2+2+2)
I. Polycythemia
II. Purpura
III. Hemophilia
IV. Heparin
V. Leukemia

Azra Naheed Medical College
Department of Biochemistry
1st Year MBBS

Test on Carbohydrates

Total Marks=50
Time=45 Minutes

Question 1.

(a.) Define & classify carbohydrates with one example from each class. (4)

(b.) Write a short note on mutarotation? (3)

Question 2.

(a.) What are Epimers & Anomers explain with examples? (4)

(b.) Give various oxidation products of glucose under different conditions. (3)

Question 3.

(a.) What are different reduction products of monosaccharides explain with examples? (4)

(b.) Explain D and L isomerism in sugars. (3)

Question 4.

(a.) What are homopolysaccharides, give four examples of homopolysaccharides with their biological importance? (4)

(b.) Compare and contrast structure and functions of starch and glycogen. (3)

Question 5.

(a.) What are heteropolysacchariges, give four examples of heteropolysaccharides with their biological importance? (5)

(b.) What is the biological importance of pentoses? (3)

5

Question 6.

(a.) write a short note on Galactosemia or Lactose intolerance. – (4)

(b.) Draw Fischer's and Howarth's structure of glucose. (3)

Question 7.

(a.) Why hydrolysis of sucrose is known as inversion? (4)

(b.) Write down the sources and biological importance of glucose. – (3)

AZRA NAHEED MEDICAL COLLEGE
LAHORE

1ST YEAR MBBS, 2014-15
(PHYSIOLOGY)

INSTRUCTIONS
1-All subjective part is to be submitted within 40mins, no extra time will be given.
2-Neat handwriting, use of margins will increase the outlook /presentation of your paper.

UNIT TEST: RESPIRATION-1 PHYSIOLOGY
SUBJECTIVE PART

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

TOTAL MARKS 30 Time40mins DATE: 16-6-15

Qno1.A. Define and calculate pulmonary ventilation and alveolar ventilation? (2)

B. Briefly outline the mechanism of inspiration? (3)

Qno2.A. List the important chest pressures during inspiration and expiration? (2)

B. Define dead space? Give its types and numericas? (3)

Qno3.A. Define pulmonary edema? What is pulmonary edema safety factor? (2)

B. Define V/Q ratio? Give its clinical significance? (3)

Qno4.A. Define respiratory unit? Give the layers of respiratory membrane? (2)

B. Explain the factors affecting the rate of diffusion of gases across respiratory membrane? (3)

Qno5.A. Enumerate the lung volume and capacities? (2)

B. Give the clinical significance of functional residual capacity and name the method to find out it? (3)

Qno6.A. Define compliance of lung. Explain with the help of diagram? (2)

B. Enlist the factors responsible for lung compliance? Discuss the role of surfactant? (3)

2:3 (B)
⇒ V/Q ratio can be measured by ventilation/Perfusion scan.
⇒ V/Q mismatch can cause type I, respiratory failure.
⇒ V/Q scans are very useful tools for determination of collagen lung disease & it causes treatment of patients.

8- Regarding myelin sheath which of the following statement is not correct

A. In the CNS it is formed by the neurilemma of the Schwann cells
B. It is responsible for the faster conduction of impulse in a nerve fiber
C. It is not a continuous sheath
D. It is formed by concentric layers of proteins alternating with lipids
E. Myelin sheath is responsible for the saltatory conduction of impulse in a nerve fiber

AZRA NASEEM

PHYSIOLOGY DEPARTMENT
1st YEAR MBBS 2017-2018

Time = 20mins
Select single best answer, all questions carry equal marks.

UNIT TEST: Heart
Date: 14-05-18

INSTRUCTIONS

1-All objective questions are to be attempted on the paper and returned to the invigilator **within 20 mins**
2-Any cutting and overwriting in objective part will not be accepted.

1. **During which phase of the cardiac cycle pulmonary valve opens?**
A. Rapid ventricular ejection phase
B. Atrial sytole
C. Rapid filling of the ventricles
D. Isovolumetric contraction
E. Diastasis

2. **The physiological function of the relative slow conduction through the AV node is to allow sufficient time for**
A. Run off of blood from the aorta to the arteries
B. Venous return to the atria
C. Filling of the ventricles
D. Contraction of the ventricles
E. Repolarization of the ventricles

3. **In an atrial pressure curve of cardiac cycle, the "c- wave" is caused by**
A. The bulging of the AV valve backward into the atria
B. Slow flow of blood into the atria from the veins, while the AV valves are closed
C. Backflow of blood when the ventricles begin to contract
D. Rapid filling of the ventricles
E. Atrial contraction

4. **"Incisura" occurs in which type of curve during the cardiac cycle?**
A. Left ventricular pressure curve
B. Atrial pressure curve
C. Aortic pressure curve
D. Ventricular volume curve
E. Right ventricular pressure curve

5. **S2 heart sound is due to**
A. Opening of the AV valves
B. Opening of the semilunar valves
C. Atrial systole
D. Closure of semilunar valves
E. Closure of the AV valves

Which phase of cardiac cycle follow immediately after the beginning of QRS wave?
Iso volumic relaxation
Ventricular ejection
Atrial systole
Isovolumic contraction
Diastasis

7. **In SA node the pacemaker potential is because of**
A. Increased leakiness of Na ions
B. An increase in K+ conductance
C. A decrease in Ca++ conductance
D. A decrease in Cl- conductance
E. Increased conductance of Na ions because of opening of Na fast channels

8. **Which of the following is the best index of pre-load on the heart?**
A. Blood pressure in aorta
B. Blood volume
C. Left ventricular end diastolic pressure
D. Pressure in the pulmonary artery
E. Left ventricular end diastolic volume

9. **A 60 year old man reports several recent episodes of syncope (loss of consciousness). An electrocardiogram is performed showing disassociation between the P wave and QRS complexes. Which of the following is most commonly associated with syncope?**
A. Sinus tachycardia
B. First degree heart block
C. Second degree heart block
D. Third degree heart block
E. Sinus bradycardia

10. **A 70 year old man came to the cardiologist for evaluation. Auscultation of the precordium revealed a diastolic murmur prominent over the left sternal border. Which of the following condition causes diastolic murmur?**
A. Aortic regurgitation
B. Aortic stenosis
C. Mitral valve prolapsed
D. Pulmonic stenosis
E. Tricuspid valve prolapsed

11. **A 40 year old female complaining of an irregular heart beat is referred for a cardiac electrophysiological study. Generation of the action potential from which part of heart is fastest in the following?**
A. AV node
B. SA node
C. Atrial muscle
D. Purkinje fibers
E. Bundle of HIS

Station 2

A 23 year old pregnant lady visited a Gynecologist. She was very upset because during her routine blood investigation, she found all values of CBC normal but increase in ESR.

a) Why her ESR is raised?

b) Name any two more conditions which cause high ESR. (0.5)

23: Hydrolysis of which of the following is called inversion:
- a. Lactose
- b. Starch
- c. Maltose
- d. Glycogen
- e. Sucrose ✓

24: Calcium deficiency may lead to
- a. bleeding disorders
- b. tetany
- c. Deficiency of Vitamin D
- d. All of the above ✓
- e. None of the above

25: Most significant source of stored energy is:
- a. Muscle glycogen ✓
- b. Adipose tissue
- c. Liver glycogen
- d. Muscle proteins
- e. Blood proteins

26: Anticoagulant properties are shown by:
- a. Hyaluronic acid
- b. Chondrotin sulphate
- c. Keratin sulphate
- d. Amylopectin ✓
- e. Heparin

27: Deficiency symptoms of Vitamin A
- a. Bleeding through gums
- b. Beri Beri ✓
- c. Nigh blindness
- d. Hyper calcification
- e. None of the above

28: Vitamin K is transported in blood in association with:
- a. Bilirubin
- b. r-globulin
- c. B-globulin ✓
- d. Albumin
- e. Immunoglobulin

29: Biliverdin is converted to bilirubin by
- a. Oxidation ✓
- b. Reduction
- c. Carboxylation
- d. Decarboxylation
- e. Isomerism

30: In heme catabolism the first bile pigment formed is:
- a. Bilirubin
- b. Cholic acid
- c. Deoxycholic acid ✓
- d. Biliverdin
- e. Chenodeoxy cholic acid

31: Cholesterol is the precursor of:
- a. bile acids
- b. steroid hormones
- c. Vitamin D ✓
- d. All of the above
- e. None of the above

32: Proteins attached with nucleic acid to form nucleic proteins are
- a. Highly acidic
- b. natural ✓
- c. Highly basic
- d. All of the above
- e. None of the above

33: Plasma proteins can be separated by:
- a. Electrophoresis
- b. Ultracentrifugation
- c. Salting out with ammonium sulphate ✓
- d. All of the above
- e. None of the above

34: Which of the following has all the polyunsaturated fatty acid
- a. Palmitic acid, Oleic acid & Arachidonic acid
- b. Palmitic Oleic acid, Stearic acid & Linolinic acid ✓
- c. Linoleic acid, Linolinic acid & Arachidonic acid
- d. Palmitic acid, Linoleic acid & Linolinic acid
- e. Stearic acid, Palmitic acid & Linoleic acid

35: Which of the following has the least density
- a. VLDL
- b. LDL
- c. HDL
- d. IDL ✓
- e. Chylomicrons

2-Which of the following are known as membrane stabilizers?

A. Na^+ ions

B. K^+ ions

C. Cl^- ions

D. Ca^{++} ions

E. None of the above

diagnosed as a case of glycogen storage disease and her liver cells are loaded with excessive glycogen due to defective functioning of:

A. Smooth endoplasmic reticulum
B. Golgi apparatus
C. Lysosomes
D. Mitochondria
E. Peroxisomes

Q12. In the cell membrane, proteins that protrude all the way through the membrane are called:

A. Peripheral proteins
B. Plasma proteins
C. Protruding proteins
D. Integral proteins
None of the above

Q12. A single triplet of 3 nucleotides present on tRNA is known as:

A. Codon
B. Anticodon
C. Code
D. Promoter
E. Genes

Q14. The chromosome consists of DNA and an electropositive protein known as

A. Globulin
B. Immunoglobulin
C. Ferritin
D. Histone
E. Fibrinogen

Q15. Cytoskeleton is important for:

A. Maintenance of cell shape
B. Locomotion
C. Intra cellular trafficking
D. All the above
E. None of the above

D. Highly undifferentiated
E. All of the above

Q17. Facilitated diffusion differs fro... simple diffusion in that

A. It needs energy
B. It needs a carrier protein
C. It occurs through leak channels
D. It involves breakdown of ATP
E. Its rate increases steadily with increase in amount of substances to be transported outside the cell membrane

Q18. Primary active transport involves' the sodium potassium pump.

A. It utilizes energy
B. It works by transporting three sodium ions out of the cell membrane
C. It functions by transferring two potassium ions inside the cell
D. It is an electrogenic pump
E. All of the above

Q19. The gene expression includes;

A. Transcription only.
B. Posttranslational processing
C. Translation only
D. Peptide linkage only.
E. Transcription, translation and protein synthesis.

Q20. The ATP produced by chemiosmo... mechanism is used in all of the following except

A. To supply energy for the transport of sodium through the cell membrane
B. To promote protein synthesis by the ribosomes,
C. To supply the energy needed during muscle contraction.
D. For membrane transport of hydrogen ions in renal tubular cells
E. For absorption of glucose by facilitated diffusion in intestine.

AZRA NAHEED MEDICAL COLLEGE, LAHORE

Mid Year Module Assesment **Total time: 120min**

Total Marks:50

1st year MBBS

Qno1-A patient of road side accident was brought to emergency department. After examination and investigations, he was diagnosed as case of hip dislocation. Give the type,variety articulation ligaments of the hip joint ?Also brief the axis movementsand muscles producing that movements?(0.5+0.5+0.5+1+0.5+2)

Qno2- Breifly describe the boundaries and contents of femoral triangle ? why femoral nerve is not in the femoral sheath ,justify ?(4+1)

Qno3 – What is fertilization ? give the phases and results of fertilization (1+3+1)

Qno4 A patient with history of road side accident is presented to surgical emergency with complain of inability to dorsiflex his right foot . with the help of your knowledge justify the anatomical basis of foot drop ? (5)

Qno5- a)Enlist the derivatives of ectoderm ?(1.5)

b) Breifly describe the components and blood flow of placenta ? (3.5)

Qno6- a)In follow up visit of diagnosed case of breast cancer patient, doctor told the family members about metastatic spread of cancer to vertebral column .With your anatomical knowledge ,give the different routes of spread of breast cancer to different parts of body.(3)

b)write a short on carpel tunnel syndrome? (2)

Qno 7 classify connective tissue and enlist different types of connective tissue cells (2.5+2.5)

Qno8 Draw &label microscopic diagram of transitional epithelium ?(5)

Qno9 a)What are pennate muscles , give its classification with examples (3)

b) give origin ,insertion ,nerve supply and action of any one bipennate muscle of lower limb (2)

Q10: a) Give the boundaries and content of cubital fossa (2.5)

b) Give course ,relation and branches of ulnar nerve in hand (2.5)

- A 29 year old internal medicine resident had a breakfast buffet after a night call. The rate of gastric emptying increases with the increase in which of the following?

A. Increased food volume in the stomach
B. Increased food volume of duodenum
C. Fat content of the duodenum
D. Acidity of duodenum
E. Release of the secretin hormone from the duodenum

10- A 15 year old boy suffered from head trauma compressing the underlying brain tissue. Which of the following blood pressure regulating mechanism occurs in response to an increased intracranial pressure?

A. Blood pressure and heart rate increase
B. Blood pressure and heart rate decrease
C. Blood pressure increases and heart rate decreases
D. Blood pressure decreases and heart rate increases
E. Blood pressure and heart rate remain constant

11- A vascular surgeon while doing a vascular repair wishes to induce a localized arteriolar constriction to help to control bleeding. An increase in the local concentration of which of the following agents will cause vasoconstriction?

A. Nitric oxide
B. Angiotensin II
C. Lactic acid
D. Adenosine
E. Carbondioxide

12- A 40 year old male was brought to the emergency department unconscious with history of Road Traffic Accident (RTA) 1 hour earlier. He lost a lot of blood due to fracture of both legs. On examination he had a very feeble pulse & his systolic blood pressure was found to be 30mmHg and diastolic blood pressure was not recordable. Which of the following blood pressure regulating mechanism will be activated in this condition?

A. Aortic baroreceptors
B. Carotid baroreceptors
C. CNS ischemic response
D. Carotid chemoreceptors
E. Aortic chemoreceptors

13- During exercise total peripheral resistance decreases because of the effect of

A. The sympathetic nervous system on skeletal muscle arterioles
B. The parasympathetic nervous system on skeletal muscle arterioles
C. Local metabolites on skeletal muscle arterioles
D. Histamine on skeletal muscle arterioles
E. Both parasympathetic & local metabolites on skeletal muscles

14- The compensatory mechanisms in non-progressive shock include all of the following except:

A. Arteriolar constriction
B. Increased heart rate
C. Sympathetic over activity
D. Sludging of small blood vessels
E. Increased level of argiotensin 2

15- When a person stands from its supine position, his/her heart rate is increased. Which of the following accounts for increase in heart rate upon standing?

A. Decreased total peripheral resistance
B. Increased vasoconstriction
C. Increased after load on heart
D. Increased preload on the heart
E. Decreased venous return

16- Which of the following part of circulatory system has the greatest cross- sectional area?

A. Aorta
B. Arteries
C. Veins
D. Venules
E. Capillaries

17- Release of which of the following substance cause vasodilation and increase the permeability of the capillaries during anaphylactic shock?

A. Nitric oxide
B. Histamine
C. Adenosine
D. Carbondioxide
E. Atrial natriuretic peptide (ANP)

18- Mean arterial Pressure is?

A. Systolic blood pressure+ Diastolic blood pressure / 2
B. It's value is nearer to systolic blood pressure than diastolic blood pressure
C. 50% of sum of Systolic and Diastolic blood pressure
D. Systolic blood pressure – Diastolic blood pressure
E. 1/3 Pulse pressure+ Diastolic blood pressure

19- Which of the following condition will decrease the filtration across the capillary membrane?

A. Increased capillary hydrostatic pressure
B. Damage to the capillary membrane
C. Increased plasma colloid osmotic pressure
D. Increased interstitial fluid osmotic pressure
E. Malnutrition leading to decreased plasma albumin levels

20- Which of the following will cause decrease in blood flow in a vessel?

A. Increase in the radius of the vessel
B. Decreased resistance of the vessel
C. Increased pressure gradient across the vessel
D. Increased viscosity of blood
E. Decreased viscosity of blood

MULTIPLE CHOICE QUESTIONS (MCQS)
Total Marks 20
Select Single b

head walks along the actin filament resulting in sliding of actin filament on myosin. This causes:

A. Shortening of A band
B. **Shortening of I band**
C. Lengthening of sarcomere
D. Lengthening of H zone
E. Moving apart of Z lines

Q24. The actin filament consists of:

A. F actin strand
B. F actin strand, troponin
C. **Tropomyosin, troponin, F actin**
D. Tropomyosin, troponin, F actin,myosin
E. Titin, myosin, F actin

Q25. End plate potential is:

A. Local potential at post synaptic membrane of a neuron
B. Action potential at post synaptic muscle membrane.
C. **Local potential at motor end plate present at neuro-muscular junction**
D. Saltatory potential
E. Receptor potential

Q26. Multiunit smooth muscle fibers are:

A. Supplied by many muscle fibers by a single nerve fiber
B. **One muscle fiber supplied independently by one nerve fiber**
C. Contract in response to hormonal stimulation
D. Do not obey the nervous stimulation
E. Are slowly contracting muscles

Q27. Which of the following is one of the major causes of death after myocardial infarction?

A. Increased cardiac output
B. Decreased pulmonary interstitial volume
C. **Fibrillation of the heart**
D. Increased cardiac contractility
E. None of the above

Q28. In skeletal muscle, the major function of the T tubules is thought to be:

A. A source of acetylcholine
B. A structural support during contraction
C. **A pathway for the inward spread of electrical activity**
D. A calcium sink
E. A pressure release mechanism

Q29. In smooth muscle the calcium binding protein is:

A. Troponin
B. Troponin I
C. Actin
D. Tropomyosin
E. Calmodulin

Rafeay

A. Mechanical activity of heart
B. **Electrical activity of heart**
C. Closure of valves
D. Contraction and relaxation
E. Systole and diastole

Q31. Which of the following events of the cardiac cycle follows immediately the QRS wave?

A. Isovolumic relaxation
B. Ventricular ejection
C. Atrial systole
D. Diastasis
E. **Isovolumic contraction**

Q32. Which of the following events is represented on the ECG?

A. SA node depolarization
B. AV node depolarization
C. His Bundle depolarization
D. **Atrial muscle depolarization**
E. Atrial repolarization

Q33. Which cardiac event follows P wave?

A. **Atrial contraction**
B. Ventricular contraction
C. Atrial filling
D. Ventricular filling
E. Both A & B

Q34. Increase in P-R interval is due to:

A. 1st degree heart block
B. 2nd degree heart block
C. Complete heart block
D. Atrial flutter
E. Cardiac arrest

Q35. Which of the following events is associated with the first heart sound?

A. Closing of the aortic valve
B. Inrushing of blood into the ventricles during diastole
C. Beginning of diastole
D. Opening of the A-V valves
E. **Closing of the A-V valves**

Q36. Rapid upstroke of ventricular action potential is due to:

A. Voltage gated slow Ca+ channels
B. **Voltage gated fast Na+ channels**
C. Voltage gated K+ channels
D. Na+K+ pump
E. Voltage gated fast Ca+ channels

D. dependent
E. The rate of contraction of cardiac muscle is approximately the same as in skeletal muscle.

Q4.07 Presence of urobilinogen in urine can indicate a liver disease such as hepatitis or cirrhosis.

(2)

Normal urobilinogen level in urine is 0.1 - 1.8 mg/dl

(3)

Increase urobilinogen may be due to liver disease (viral hepatitis) obstruction of gallbca may be due to hemolytic anemia or overburden in of liver.

(4)

Ehrlichs aldehyde reagent.

Abdullah Qadir III

Q4a) Presence of urobilinogen in urine can indicate a liver disease such as hepatitis or cirrhosis.

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Zeeshan Ali- 125

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Ehrlichs aldehyde reagent.

9-Which of the following is the true action potential and able to propagate?

A. Motor endplate potential

B. Excitatory post synaptic potential

C. Inhibitory post synaptic potential

D. Spike potential

E. Miniature end plate potential

Date: 20/07/2020

Sun Mon Tue Wed Thu Fri Sat

Mukashfa Musharaf (138)

Biochemistry Questions.

①

Presence of urobilinogen in urine can indicate a liver disease such as hepatitis or cirrhosis.

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②

Normal urobilinogen level in urine = 0.1 - 1.8 mg/dL

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③

⇒ Increase urobilinogen may be due to liver disease (viral hepatitis, cirrohsis, obstruction of gallbladder by gallstones etc).
⇒ may be due to hemolytic anemia or overburdening of liver.

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④

Ehrlichs aldehyde reagent.
