Dept of Pathology, ANMC Lahore

Test-1 for supplementary students held on 17 September 2014

Time: 12:30-01:30 Total marks: 50

Q1 (a) Define sterilization
(b) Write the principle and procedure of sterilization by autoclave (2)
(3)

Q2 Enumerate the differences between endotoxins and exotoxins (5)

Q3 (a) Enumerate the mechanisms of antimicrobial drug resistance with examples
(b) Define plasmid and transposons (3)
(2)

Q4 Briefly discuss causes of cell injury (5)

Q5 (a) Define necrosis
(b) Briefly describe all types of necrosis (1)
(4)

Dept of Pathology, ANMC Lahore

Test-8 for supplementary students held on 2nd October 2014

Time: 12:30-01:15 Total marks: 25

Q1 Give classification of paraneoplastic syndrome with underlying form of cancer in tabulation (5)

Q2 Enumerate tumor suppressor genes

Q3 Define metastasis and schematically draw sequential steps involved in hematogenous spread of a tumor

Q4 (a) Enumerate the opportunistic fungi and the diseases caused by them
(b) Describe the diagnostic tests used for diagnosis of fungal infections. (2)
(3)

Q5 (a) Write a note on dermatophytosis
(b) Discuss the pathogenesis of infection caused by candida albicans

Dept of Pathology, ANMC Lahore

Test-2 for supplementary students held on 18 September 2014

Time: 12.30-01:30 Total marks: 50

Q1 (a) Classify Streptococci on the basis of hemolysis

(b) Enlist the diseases along with the mechanisms caused by Staphylococcus [illegible] 3+

Q2 a) Enumerate the species of Clostridium [illegible]

b) Explain the pathogenesis of tetanus

Q3 (a) Name the pathogenic Gram –ve cocci

(b) Enlist the virulence factors and pathogenesis of [illegible]

Q4 Briefly describe the intracellular and extra-cellular pigments

Q5. Write short note on apoptosis

Dept of Pathology, ANMC Lahore

Test-3 for supplementary students held on 22nd September [illegible]

Time: 12:30-01:30

Q1 Enumerate chemical mediators of acute inflammation

Q2 Give morphological patterns of acute inflammation with one example each (5)

Q3 Explain shigella dysenteriae type-1 under the following heads

a. Pathogenesis and pathology (2)

b. Toxins produced (1.5)

c. Culture on tripple sugar iron agar (1.5)

Q4 Write short notes on

a. Typhidot test (2)

b. Quellung reaction most suitable for the identification of a member of enterobecteriaceae. (1.5)

c. Oxidase test (1.5)

Q5 Identify the organisms belonging to Enterobecteriaceae (5)

Indole	Methyl Red	Voges-Proskauer	Simmons Citrate	Urease	Motility	[illegible]
-	+	-	-	-	+	
-	-	+	+	+	-	
+	+	-	+	+	-	
+	+	-	-	-	-	
-	-	+	+	-	+	

Virology:-

5. A 40 years old man complaint of fever, vomiting, anorexia and deep yellow coloured urine. The blood examination revealed high levels of SGOT, SGPT & alkaline phosphatase, the direct bilirubin is also high.

a. Name the viruses causing hepatitis (1) Hepandavirus HBV.

b. How can you confirm the type viral infection by serologies (3)

c. Name the complications (1)

(Haemodynamics)

6. a. Define septic shock. (2)

b. Explain the patho-physiology of shock. (3) 116.

7. a. Name the tapeworms. 2 Cestodes.

b. Describe the life cycle, laboratory diagnosis of Echionococus granulosis. 3

Neoplasia)

8. A 65 year s old women attends the hospital with breast lump for the last 6 months and pain in right hypochondrium for 10 days. She is diagnosed as carcinoma breast with metastasis to the liver.

a. Give the flowchart of the steps involved in haematogenous spread of tumor (3)

b. Name the various types of carcinogenic agents.

9. A 40 year old obese looking man who is a chain smoker, comes to the hosp... ...th a history of chronic cough and weekness. On investigation, he is diagnosed to have carcinoma lung.

123 Pathoma(Neoplasia)

a. What do you understand by paraneoplastic syndrome? Give its examples. (3)

b. Name the various laboratory diagnostic procedures for neoplasia. (2)

(Genetics)

10. A 40 year old female gives birth to a child with flat facial profile, oblique palpebral fissure and epicanthic folds. He grew up to be a mentally retarded child. Down Syndrome

a. What is the expected underlying chromosomal abnormality in this child? (2)

b. Describe the mechanism of development of this genetic abnormality? (3)

Inflection(93)

11. A 50 year old woman had fracture of her femur. After 1 month, closed reduction was done. What are the factors which lead to non healing of the fracture? (5)

(36) Inflamation

12. Define and classify gangrene necrosis. Give description with examples of each type. (5)

13. A 25 year old male developed a red hot fluctuant swelling on the upper arm after receiving an intramuscular injection at that side. The cause of fluctuant swelling was local fluid exudate formation. Describe the mechanism of this exudates formation. (5)

Inflection

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QNO: 11(a) The caustive agent is the Treponum Pallidum and the diagnosis is the syphills.

The false negative response which results from the high antibody titles which interference the antigen-antibody lattice formation necessary to visualize the positive fluorocation test.

(c) Nonspecific
non-treponemal Ag is used as the cardiolipin
01-VDRL
02-RPR
WR

Specific
For non-Treponemal
Ag is used as the Treponemal antigen.
TPHA (ii) TPI (iii) FTA-ABS FTA-ABS

Treponum Pallidum and diagnosis is the syphills.

Q-No: 11. A 25 year old woman had a papular rash on her trunk, arms and palms with no itching. Vaginal examination revealed two flat, moist, slightly raised lesions on the labia. Specimen from a labial lesion was examined in a dark field microscope revealing spirochetes.

a) What is the most likely diagnosis and the causative agent? 1

b) Explain the term prozone phenomenon. 1

c) Name the specific and non-specific tests for the diagnosis of the above mentioned case. 3

Special Bacteriology

Q-No: 12. You are a physician at medical camp where an outbreak of diarrhea occurred. Patients complained of excessive frequency of watery stools, with no blood. Gram stain of stool show Gram negative curved rods.

a) What is the most likely diagnosis? → Vibrio cholerae

b) Briefly describe its pathogenesis?

c) How it can be further confirmed in laboratory? TCBS medium: (ii) Stool culture (iii) Transporting medium (iv) Identification and the isolation of organisms. agglutination of polyvalent O, and antiserum.

Special Bacteriology

QNO: 12(b) pathogenesis:-
Vibrio cholerae produces the cholera toxins that targets on the host Gs protein. The Gs protein modification results in the activation of the adenylate cyclase which causes an inc in the cAMP concentration.

Q-No: 13 An HIV-Positive patient has progressed from fatigue, rash, nausea and night sweats symptoms to occasional but defined opportunistic infections.

a) Enlist one opportunistic fungal infection, 1 viral infections and one malignancy associated with AIDS. 3

b) What are types of HIV virus and what disease it causes? 1

c) Tabulate the structural proteins and genes of HIV. (2020 sendup) 1

2020 send up

Q-No: 14. A 40 years old shepherd of sheep presents with upper right quadrant pain and appeared slightly jaundiced. A stool exam was negative for ova and parasites but a CT scan reveals a large 14 cm cyst that appears to contain fluid, in the right lobe of the liver.

a) What is most likely diagnosis? Name the parasite responsible for this lesion. 1

b) Draw and label its life cycle. 2

c) Discuss lab diagnosis. 2

Parasitology → Hydatid cyst disease. Echinococcus granulosus
CT scan, MRI, Ultrasound and Parasite:- Echinococcus granulosus.

Q-No: 15. A female patient presented to OPD of a hospital. She had a white patch on her tongue. It was thought to be a fungal disease.

a) What is the patient suffering from? 1

b) What are four approches to lab diagnosis of fungal diseases? 4

Candida albicans :- Thrush

Mycology

Key to OMS (301)

15(b) In the clinical specimen, it's

18(c) Spores:- The budding yeast and pseudohyphae are present.

The ... is cyst ... active in the diseased and immunocompetent patients.

Gag	p24, p17, p7	Nucleocapsid matrix
Pol	Reverse transcriptase, Integrase, Protease	
env	GP120	CD4 proteins attachment.
	GP41	Fusion with the host cells.

QNO: 14(b)

(1) Hydatid cyst in the liver, lungs → (2) Protoscolex from cysts → (3) Scolex attaches to the intestine → (4) Adults in the intestine → (5) Embryonated into feces. → (6) Penetrate into the intestinal wall

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QNO: 13(a) Fungal infections

Thrush caused by the Candida albicans, meningities caused by the Cryptococcus neoformans.

Hairy leukoplakia by the EBV. Esophagities caused by the herpes simplex virus 1.

Kaposi's sarcoma caused by the Herpes simplex 8.

(b) HIV-1 and HIV-2 cause the AIDS. HIV-1 is a world wide, HIV-2 in the west Africa.

Lab Diagnosis for the Mycobacterium Tuberculosis -
(i) Biochemical Tests
(ii) Lepromin Tests
(iii) Interferon gamma release assay
(iv) Tuberculin Test

Pathogenesis of Mycobacterium tuberculosis: -
Organism does not produce the exotoxins. Does not contain any endotoxin in their cell wall. Organism infects the macrophages and the reticuloendothelial cells. Organisms survive within a cellular vacuole called as the phagosomes. Then the organism produces a ... peptide proteins which prevents the fusion with the lysosomes allowing the organism to escape the degradative enzymes.
Secondary tuberculosis agent is the mycobacterium tuberculosis.

Department of Pathology
Azra Naheed Medical College
Sent up 2018
MBBS 3rd Year (SEQ)

Time Allowed: 2 hour

Total Marks: 75

Name: Kalsoom Shaukat
Roll No: F15-092
Date:

Instructions:
1. All subjective questions are to be attempted on the paper and returned to the invigilator within specified time after you have received the question paper.
2. Neat hand writing and use of margins will increase the outlook and presentation of your paper.

Attempt all Questions. Each Question carries 5 marks

1. a. Draw and label the bacterial growth curve. 3 → GB
b. Name the mechanisms of transfer of bacterial genetic material? 2 transformation, transduction, conjugation.

2. A 54-year-old patient presents with a persistent cough, hemoptysis, and weight loss. A sputum sample is collected that has a positive acid-fast stain. → Special bacteriology
mycobacterium TB.
a. What is your diagnosis? 1 TB
b. Give its pathogenesis. 4 185

3. Several students of a primary school in a village fell ill. All of them were admitted to local hospital following vomiting and diarrhea. Purging was effortless and the feces were of fishy smell and rice watery. (comma shaped) Special Bacteriology
a. What is your diagnosis? 1 Vibrio Cholera
b. What is its mode of transmission? 1 feco-oral route.
c. What is the pathogenesis of it? 3 159.
mac. Conkey agar
TSI agar
oxidase +ve

4. A 3-year-old girl was brought to the emergency room by her parents because of fever and loss of appetite for the past 24hrs and difficulty in arousing her for the past 2 hours. Her temperature was 39.5°C, pulse 130/min, and respiration 24/min. Blood pressure was 110/60mmhg. Blood was obtained for culture and other laboratory tests. Lumbar puncture was performed in less than 30 minutes after the patient arrived in the emergency room. The CSF aspirated was cloudy. Gram staining showed numerous polymorphonuclear cells along with gram negative diplococci. Special Bacteriology: -
Meningitis and causative agent is the Neisseria meningitides →
a. Name the disease & the causative agent. (2) Neisseria Meningitidis cause Meningitis
b. What are the differences in the CSF of viral, bacterial and tubercular meningitis? (2)
c. Name one organism each causing meningitis in following age groups:
- Neonates E. coli, Listeria monocytogenes
- children and Adults (1) H. influenza, Streptococcus pneumoniae.
d. Enumerate two differences between gonococci and meningococci. (1)

genital tract	Respiratory tract
Polysa. capsule absent	present.
β lactamase some	none
no vaccine	available
acid from maltose -ve	+ve

	Portal of entry	Maltase	Polysaccharide capsules	Vaccine available
Neisseria meningitides	Respiratory Tract	+ve	+ve	+ve
Gonorrhoeae	Genital Tract	-ve	-ve	-ve

Q.No:-09

Grading can be I, II, III, IV on the basis of the anaplasia. Grading is the of less clinically value.

(b) grading tends to establish the level of aggressiveness and the level of metastasis is based on the cytological differentiation of the tumor cells and no. of mitosis present in the tumor.

Q.No:6 (a) Osteoma. Chondroma. Lipoma. Rhabdomyoma

Key to UHS 192 (Genetics)

Q-No: 5. A 40 year old female gave birth to a child with flat facial profile oblique palpebral fissures, and epicanthic folds. He grew into a mentally retarded child. Down

a) What is the expected underlying chromosomal abnormality in this child? 1

b) Describe the mechanism of development of this genetic abnormality. 4

Key to UHS page 215 (Neoplasia)

Q-No: 6. A 24 year old female with a history of heavy and painful menstrual period has been having difficulty conceiving despite months of trying to become pregnant. Her workup included a bimanual pelvic examination and an ultrasound, which demonstrated a massive uterus that was presumed to be a leiomyoma.

Osteoma (ii) Chondroma (iii) Lipoma

a. Enlist any four Mesenchymal benign tumors other than leiomyoma. 2

b. How would you grade a tumor? 3

Immunology

Q-No: 7. A person develops rashes all over his body after stung by a bee while handling a bee-hive to collect honey

a. Which type of hypersensitivity is this? Type I hypersensitivity or IgE mediated. 1

b. What is the best example for type four hypersensitivity reactions? 4

Q-No: 8. By which method of sterilization we can sterilize the instruments and bed linen in the hospitals and operation theaters? General bacteriology

a) What is its principle and procedure? 2

b) Define the following: 3

i. Transposons

ii. Sterilization → absolute term used for absence of all viable microorganism (killing or removal of all microorganisms.

iii. Spore and its medical implication

Pieces of DNA that moves from one site to another either b/w the DNAs plasmids and bacteriophages. Not capable of the replicating themselves. Replicated in the pieces of DNA in which they are integrated.

Q-No: 9 A 22 years old male develops high grade fever with persistent headache and constipation. Hepatosplenomegaly, lymphadenopathy and rose spots on the abdomen are observed in the second week of infection. Salmonella typhi

a) Briefly discuss the pathogenesis of this infection. What can be the possible complication if this patient is left untreated? 3

b) Name the gold standard laboratory test for diagnosis of this disease and reaction of its pathogen on TSI agar. Widal Test 2

Salmonella typhoid. survives within the acidity of the stomach & invades the payer patches of the intestinal wall. macrophages (payer patches).

(iii) Spores:- The highly resistance structures which are formed in the response of the adverse conditions by the two medically important genera including bacillus anthrax and clostridium tetanus. Medically Implications:- (i) Highly resistance to the heat. (ii) High resistance to many chemicals. Kills the spores.

Q-No: 10. A 42- year old male presented with a history of productive cough, night sweats low grade fever and weight loss for the last 3 months. Chest X-ray reveals opacity in the upper zone of the left lung. Histopathology reveals granulomas. TB showing long slender rod

a) What is the most likely causative agent and the disease? 2

b) Name the special staining technique used for the dingnosis. ZN staining 1

c) Discuss the laboratory diagnosis of this case.

(1) Biochemical Test (iii) Luciferase test (2) Tuberculin test (iv) Gamma interferon release

& sterilized. heated at 121°C for 15 minutes to be medical supplies must be

Q.No:08 (a) Autoclaving

Principle:- Pressure is used to produce the high temperature steam to achieve the sterilization. Water boils at 100°. Water boils in a closed container, pressure inside the container raises results corresponding increase the boiling temperature. Steam is superheated. Superheated steam is condensed on the cooler objects. Release the thermal energy required for the denaturation of the proteins.

Procedure:- It consists of the vertical and the horizontally linder. An end is opening which keeps materials to be sterilized. Valve is used to measure the pressure. Basket is used to sterilize the materials.

n

• No wound contracture
Minimal loss of the function.
• Less inflammatory Reactions.
Less scar formation.

Q No:04 diarrheal illness
Lower abdominal pain
watery diarrhae.
lactose fermentation.

4. A 2-year-old boy who recently started attending preschool and after-school daycare is brought to his pediatrician for a diarrheal illness characterized by fever to 38.2°C, severe lower abdominal pain, and initially watery diarrhea followed by blood tinged stools after 24 hours. The mother reports that two other children who attend the same after school daycare have recently had diarrheal disease. The organism appeared to be lactose fermenter after culturing.
a) Name the likely pathogen and the disease (0.5) — E.coli; Vibrio cholerae
b) Name strains of this bacterium and which strain is causing the disease? (1) — O139, O1 V.cholerae; O1, El Tor
c) Give the pathogenesis of the disease (2)
d) How will you proceed with laboratory of this organism? (1.5)

E.coli =
vibrio cholerae
cholerae
O139

→ Special bacteriology
(6) Presumptive diagnosis is by
(5) agglutination of O and O antibody titer of antiserum
→ . Culture Stool.
. TCBS Media
. Transport Media
. Isolation and identify

5. A Foley's catheter tip sample of a chronically debilitated patient was received in the microbiology laboratory for culturing
a) What is the method used for sterilization of disposable Foley's catheters and other disposable single use items in the hospitals? (0.5)
b) What is autoclaving and its principle? (1)
c) Draw and compare the cell wall of Gram positive and Gram negative bacteria (2)
d) What is the genito urinary flora before and after puberty and its significance? (1.5) Lactobacillus → Low vaginal pH. Prevention from vaginatis.
(35) Lactobacillus

Gamma Radiation
Temperature = 121°C
Pressure = 15 Ib/inch
15-20 min

6. a) Define necrosis. Describe the types of necrosis with one example each (2.5)
b) Define metaplasia. What is its mechanism? Give examples (2.5) — 51 Page (Barrets esophagus)

surgical incision is approximated by
The surgical suture is called
as the healing by first is

7. a) What is healing by first intention? (1) very little tissue loss
b) Tabulate the differences between healing by primary intention and secondary intention. (2) 96
c) What are the factors affecting wound healing (2) 93
Infection, diabetes, Glucocorticoids, Nutritional status, poor perfusion
2o Skey to UNS Mechanical factors

systemic lipous erythematous.

8. A 33 year old female presented to the outpatient department with symptoms of butterfly rash, photosensitivity and joint pains for the last 6 months. Labs showed anemia and thrombocytopenia
a) What is the most probable immunological disorder? (0.5) Systemic lupus erythematosus
b) What are the auto antibodies of this disease? (0.5) IgG, IgA, IgM
c) Name 4 auto immune diseases with corresponding auto antibodies (2) → autoimmune diseases:
Rheumatic fever → IgG
Arthritis → IgM
ACHR → Mysthenia Gravis
IgE → Hay fever
IgE → Anaphylaxis
d) What is the normal defensive mechanism of innate immune system of our body against an inciting antigen? (2)

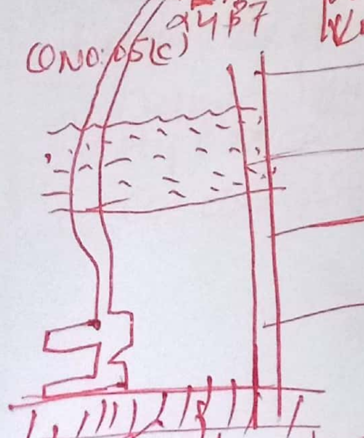
9. A young boy accidental victim of honey bee sting. At the site of bite the skin become red, swollen edematous. This is because of vascular and cellular changes at the site of acute inflammation
a) Briefly discuss the sequence of cellular events involved at the site discussed in above scenario (2) pg - 64
b) Draw and label the microscopic appearance of Granuloma (1.5)
c) Enlist leucocyte and endothelial adhesion molecules along with their ligands (1.5) 64. Inflamation

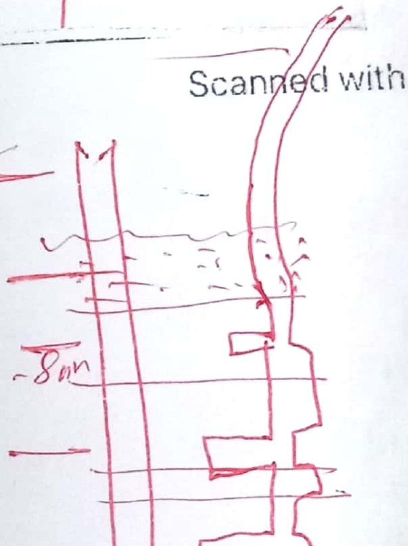
Page 62
PDF

62 Pages.

L selectin	Sialyl-Lewis
E selectin	Sialyl Lewis
P selectin	Sialyl Lewis
LFA-1	ICAM
MAC-1	ICAM
VLA-1	VCAM
α4β7	VCAM

Q No: 05(c)





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2.50
2.50
2.00
3.00
3.00
4.00
1.00
2.00
39.59
(20)

Factors that impair the wound heal...
- Infection
- Diabetes
- Nutritional status
- Glucocorticoids
- Persistent
- mechanical factor
- type and extent of Reaction

THE SUPERIOR COLLEGE, LAHORE

3rd PROFESSIONAL MBBS

ANNUAL EXAMINATION 2019

PATHOLOGY

(SEQ'S)

Roll No. E16-078.

Time Allowed: 2 hours

Total Marks: 75

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. (Inflammation)

a) Enumerate different stimuli for Acute Inflammation? 2

b) How will you differentiate between transudate and exudate? 3 (Immunology)

Transudate	Exudate
Poor protein	High protein
gravity < 1.01	> 1.01
... > 75	< 75
Clear colour	Yellow
Glucose same as in ...	

Q-No: 2. A 65 year old man developed low grade fever with productive cough and lymph node enlargement. His chest X-ray was done and showed multiple opacities. Histological report of these lesions conferred features of chronic granulomatous inflammation with tuberculosis etiology.

a) Enlist six causes of chronic granulomatous inflammation? 2

- Persistant infections
- Hypersensitivity diseases
- Prolonged exposure to the toxic agents
- Bacterial, fungal, Parasitic infections
- Autoimmune diseases.

b) What kind of hypersensitivity reaction has occurred in this patient? 2 (Immunology)

c) Give its pathogenesis. 1

(Inflammation chapter)

Q-No: 3. A 35 year old male presented in the surgical emergency with large excisional wound on his left leg creating a large defect on skin surface.

a) Name the type of healing in above condition. Second 1 (inflammation chapter) plasma

b) Name the factors that can influence the wound healing (93 page) 2 (i) Injury (ii) Diabetes (iii) nutritional status (iv) Poor perfusion, mechanical factors, Glucocorticoids, location of injury, extent and type of the injury.

c) Enlist four growth factors and cytokines affecting various steps in healing 2 (GF)

Q-No: 4. A 20 year old hockey player fractured his femur during a game. Over the next few days in hospital, he developed progressive respiratory problems and died 3 days later. On autopsy, oil red-O positive material is seen in the small blood vessels of the lungs and brain. fat emboli.

a) Which complication has occurred in him? Give its pathogenesis. 2

b) Enumerate the three primary influences on thrombus formation and name this triad. 3

(Virchow)

(b)
- Endothelial injury
- Turbulent blood flow
- Hypercoagubility of the blood.

Q No: 04 (a) Pulmonary fat embolism.

Pathogenesis: After the fracture of the long bones the fat is released from the bone marrow and enters to the circulation after the rupture of marrow vascular sinusoids. Through the circulation, the fat embolism occludes pulmonary vesculture leading to the respiratory problems.

Q No: 03 (c)
(1) Epidermal Growth Factor.
(2) Platelet derived growth factor
(3) Fibroblast growth factor
(4) Transforming growth factor

cytokines:
TNF
IL-1.

THE SUPERIOR COLLEGE, LAHORE

2nd PROFESSIONAL MBBS

Annual EXAMINATION 2017

PATHOLOGY

(SEQ's)

Roll No. E14023

Total Marks: 75

Time Allowed: 2 hours

Instructions

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

Q-No: 1. A 70 years old male was found to have stenosis of right renal artery which caused shrinkage of right kidney.

a. Which process actually caused his kidney to shrink? 1

b. What are other different adaptations which can happen, give types and examples 4

Q-No: 2. A 35 year's old female developed skin blister on her foot while spilling of hot oil while cooking.

a. Name the morphological pattern of inflammation in this case. 1

b. What are sequence of events during the process of inflammation? 3

c. Name two types of granulomatous inflammation. 1

Q-No: 3. A 50 years old diabetic female had a deep cut on her hand. The wound fail to heal.

a. What is the cause of delayed wound healing in this case. 1

b. List 2 local and 2 systemic factors affecting wound healing. 2

c. What is keloid? 2

Q-No: 4. A 25 year old female gave birth to a baby by C- section.

a. What kind of wound healing will occur in this case. 1

b. what are the different types of wound healing 2

c. what are the common organisms to cause infection in these patients. 2

Q-No: 5. A child is brought to a doctor and he notices that the baby has flat facies, epicanthal folds, Siamese crease, umblical hernia, and hypotonia with increased gap between Ist and second toe

a. What is the most likely diagnosis? 1

b. Give its genetic make up 2

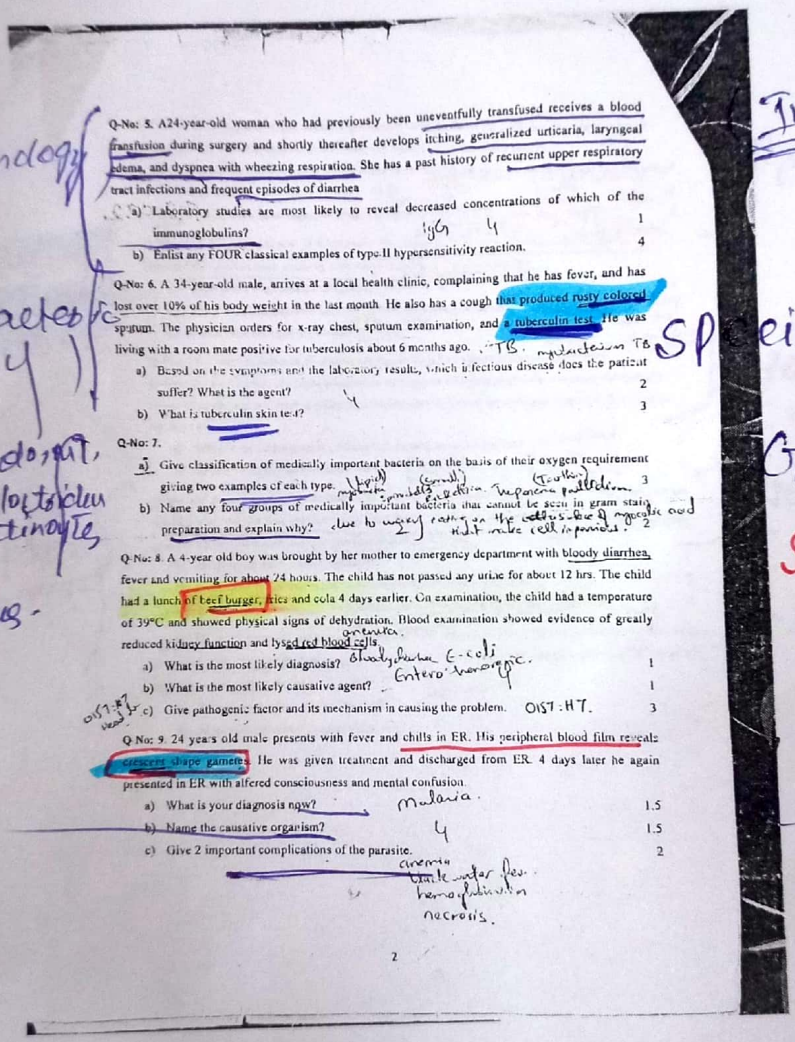
c. Write down 2 differences between autosomal dominant and autosomal Recessive disorders. 2

Q-No: 6. A 5 years old child has seasonal allergies, He develops swelling and itching after a subcutaneous injection of pollen.

a. What is the type of hypersensitivity reaction involved in this case? 1

b. Draw a table and write down different types of hypersensitivity reactions with their immunomechanisms. 4

P.T.O



Q-No: 5. A24-year-old woman who had previously been uneventfully transfused receives a blood transfusion during surgery and shortly thereafter develops itching, generalized urticaria, laryngeal edema, and dyspnea with wheezing respiration. She has a past history of recurrent upper respiratory tract infections and frequent episodes of diarrhea

a) Laboratory studies are most likely to reveal decreased concentrations of which of the immunoglobulins? 1

b) Enlist any FOUR classical examples of type-II hypersensitivity reaction. 4

Q-No: 6. A 34-year-old male, arrives at a local health clinic, complaining that he has fever, and has lost over 10% of his body weight in the last month. He also has a cough that produced rusty colored sputum. The physician orders for x-ray chest, sputum examination, and a tuberculin test. He was living with a room mate positive for tuberculosis about 6 months ago.

a) Based on the symptoms and the laboratory results, which infectious disease does the patient suffer? What is the agent? 2

b) What is tuberculin skin test? 3

Q-No: 7.

a) Give classification of medically important bacteria on the basis of their oxygen requirement giving two examples of each type. 3

b) Name any four groups of medically important bacteria that cannot be seen in gram staining preparation and explain why? 2

Q-No: 8. A 4-year old boy was brought by her mother to emergency department with bloody diarrhea, fever and vomiting for about 24 hours. The child has not passed any urine for about 12 hrs. The child had a lunch of beef burger, fries and cola 4 days earlier. On examination, the child had a temperature of 39°C and showed physical signs of dehydration. Blood examination showed evidence of greatly reduced kidney function and lysed red blood cells.

a) What is the most likely diagnosis? 1

b) What is the most likely causative agent? 1

c) Give pathogenic factor and its mechanism in causing the problem. 3

Q-No: 9. 24 years old male presents with fever and chills in ER. His peripheral blood film reveals crescent shape gametes. He was given treatment and discharged from ER. 4 days later he again presented in ER with altered consciousness and mental confusion.

a) What is your diagnosis now? 1.5

b) Name the causative organism? 1.5

c) Give 2 important complications of the parasite. 2

14. A five year old girl is brought to the emergency with severe respiratory difficulty and wheeze, half an hour after intake of fish. There is history of similar episodes in the past.
    a. Name the type of hypersensitivity reaction involved. (1) Type I
    b. Name two preformed and two newly synthesized mediators of mast cells and their actions. (4)

(Immunology)

15. A 62 years age smoker have severe arthritis and on immunosuppressive therapy, lung biopsy shows septate hyphae that form v shaped branches, agar shows conidia with spores in radiating column

    a. What is the diagnosis Aspergillosis (1)
    b. Mode of transmission - Air borne droplets (2)
    c. Pathogenesis (3)

(Mycology)

b- What are tumour markers , give 4 tumour markers. 1.5 Pg# 239

c- What are paraneoplastic syndromes , give 3 examples 2 Pg# 237

Q-8 A 31 years old female, after eating pea nuts developed severe dizziness, head ache and hypotension which resulted in fainting. Patient was rushed to the hospital and doctor diagnosed the patient having episode of anaphylaxis

a- What type of Hypersensitivity reaction did the patient experience? 1 Type I Pg# 857

b- What are other types of hypersensitivity reactions? Give pathogenesis and one example of each. 4 KTU Pg# 168

Q-9 a- Draw life cycle of plasmodium 2.5 Pg# 435

b- Draw the eggs of:

1- *Schistosoma mansoni* Pg# 465

2- *Schistosoma hematobium* Pg# 476

3- *Ascaris lumbricoides* Pg# 456

4- *Giardia lamblia*

5- *Taenia solium*

Q-10 a- Write down the mechanism of bacterial resistance of drugs. Give Examples. 2 Pg# 87

b- What are different phases of bacterial growth curve. 1

c- Define the term bacteriostatic and bactericidal 2

Q-11 After recent flooding in a local area, there is large influx of patients with classical rice stools

a- Name the most likely etiological agent 1 Vibrio cholera

b- Write pathogenesis and lab diagnosis of this 3 Pg# 159

c- Write down 2 differences between endotoxin and exotoxin 1 KTU Pg# 187

Q-12 A new born child born in village by a grandmother develops strong muscular spasms, arching of back dies of respiratory failure after a week.

a- Name the most likely etiological agent 1 Clostridium tetani

b- Name 3 other bacterial species of genus with diseases caused by these organisms. 3 Pg# 138.

c- Another new born developed meningitis and died next day. Name two organisms responsible for the disease. 1 Streptococcus agalactiae, E. coli, Listeria monocytogenes, Haemophilus influenzae.

Q-13 A 40 years old diabetic female comes to the clinic with complains of itching in groin region along with burning micturition. She has also noticed white colored discharge from her vagina?

c - thrush, oesophagitis, Mucocuteanous candidiasis → Diaper, rash

13d) cryptococcus, cryptococcal Meningitis.

a. What fungal infection can cause this disease? 1 Candidiasis is a fungal infection caused by yeast.

b. What is the condition patient suffering from? 0.5 Candida albicans.

c. What are the other presentations of infection with this fungus? 1.5

d. Name fungal disorders common in immunocompromised patients 2

P. (Q-14) a) Describe pathogenesis and the clinical spectrum of infection by dengue virus? P# 358
2.5

b) How will you confirm diagnosis in laboratory? serological test, isolation of virus

c. Name 2 oncogenic viruses with associated tumours. 1 HIV → Aids, hepatitis B virus → hepatitis

(Q-15) A 14 year old girl develops rapidly spreading, painful, erythematous rash on her leg. The rash was warm and tender and her temperature was 38oC. Gram positive cocci were seen in the aspirate from the lesion. Culture of the aspirate on the blood agar grew colonies surrounded by β- hemolysis. Growth of the organism is inhibited by bacitracin.

(a) What is your most likely diagnosis? 01 Streptococcus Pyogenes

(b) Enumerate the mechanism and prominent clinical features of two immunologic diseases caused by this organism. 04 P# 119 antibody antigen complex — Acute glomerulonephritis, Acute Rheumatic fever. immunologic cross reaction

Q) Diff B/w Benign & Malignant Neoplasm (2

→ Rheumatic fever
→ Glomerulonephritis →
autoantibody against cell
→ antigen antibody complex ↓ Deposit on cap

Q5) Define-

a) Metaplasia

b) Anaplasia

c) Hematoma

d) Teratoma.

Q) What do you Grading/Staging

Q NO: 11 (d) India ink preparation forms the background. Its colloid particles do not penetrate the capsule which forms a halo around the cells. The yeast cell forming a halo around the cells stained negatively. It will help in the identification of cryptococcus neoformans.

Q NO: 11 Lab diagnosis of the Cryptococcus Neoformans: India ink preparation for the CSF will show a yeast cell surrounded by the thick capsule. Culturing of the organisms shows the high mucoid colonies. (03) Serological test for the antigens and antibody titre (v) Capsular antigen is high quantity in the infection spinal cord and detected by the latex particle.

2020 Sendup

(Virology)

10. (a) What is the route of polio virus infection? (1) feco-oral route.

(b) Antigenically, how many serotypes are there? (1) 3; abortive, paralytic, nonparalytic

(c) If person get polio virus infection, is he a candidate for polio vaccination? (1) yes

(d) How many types of polio vaccine are there; name them? (2) → Live attenuated vaccine (Sabin) (SALK); Killed vaccine (SALK)

Paralytic
Nonparalytic
Abortive

(Mycology)

11. A 55 yr old man who is HIV positive had persistent headache, low grade fever for last two weeks. Budding yeast with wide capsule in India ink preparation of spinal fluid are seen.

a) What is the most probable diagnosis? (1) Cryptococcus neoformans

b) Mode of transmission (1) pigeon droppings → 302 Key to UHS.

c) How will you diagnose in lab (2) → 300 page Key to UHS

d) What is the importance of India ink preparation? (1)

Cryptococcus Neoformans
India ink
Periodic acid schiff
methenamine silver

12. A child is brought to the pediatric ward with edema of the dorsum of hands and feet and swelling of the nape of the neck. On examination the patient has a webbed neck and is short of her age.

a) Name the CONDITION from which this patient is suffering? (1) Turner syndrome. Turner Syndrome

b) Give its KARYOTYPE. (1) 45 X

c) Enlist any THREE autosomal dominant disorders along with the main systems involved. (2) →
- ~~Huntington disease~~
- Polycystic Kidney disease → Renal
- Osteogenesis imperfecta → Bone
- Myotonic dystrophia → Muscle

13. A 21 years old medical student was bitten by honey bees on his trip to Changa Manga. He presented in emergency ward with body swelling, stridor, wheezing and low blood pressure. There is significant past history of asthma.

a) Most likely diagnosis (1) Septic shock

b) What type of antibody mediates this shock? (0.5) IgG, IgA, IgM.

c) Different types of shock with examples (2)

d) Name different stages of shock. (1.5) Progressive, Nonprogressive, Irreversible.

Types:
- Cardiogenic → Heart
- Hypovolemic → BP
- Anaphylactic → Allergic
- Neurogenic → NS
- Septic shock → Infectious

14. A 70 year old male suffering from lung Ca presents with swollen face, purple striate on abdominal skin and cushingoid features.

a) Explain the reason for such presentation (3) paraneoplastic syndrome

b) Give morphological features of anaplastic cells. (2) loss of polarity, pleomorphism, nucleus : cytoplasmic ratio, Anisonucleosis, giant cells, hyperchromatic, nuclei are variable & bizarre.

Neoplasm

is a heterogenous group of disorders infections. Tumor. Found to extract. Occurs before or after pregnancy.

15. Write short notes on following

a) Why P53 is known as "Guardian of Genome" (2.5)

b) Two hit hypothesis of oncogenesis (2.5) most genes require two mutations to cause a phenotypic change.

Q NO: 15(b) The two hit hypothesis is also known as the Knudson hypothesis is that the most suppressor genes require

Conserve stability by preventing genome mutations.

(ii) Due to its MM, it is 53 kilodalton for action of the cell protein.
Located on the 17th chromosome.

Q NO: 14(b) Features
- Hypochromatic nuclei
- Prominent nucleoli
- Nucleus : cytoplasm ratio
- loss of polarity
- Pleomorphism

Examples of the paraneoplastic
- Cushing Syndrome
- Hypercalcemia.
- Carcinoid Syndrome.

Q NO: 15(b) The two hit hypothesis is also known as the Knudson hypothesis. The hypothesis is that suppressor gene require both of the alleles to be inactivated either through the inactivation of the mutations or through ...

Scanned with CamScanner

Q-No: 7. a. Define following terms

i. Metapalsia abnormal change in the nature of tissue.

ii. Carcinoma In-situ group of abnormal cells (before cancer) seen in their normal place

iii. Hamartoma

iv. Teratoma

b. Name 2 paraneoplastic syndromes. 1

c. Describe the role of p53 in tumour formation 2

Q-No: 8. A 40 years old female presented with lump in the breast with wide spread metastasis.

a. Draw and label the mechanism of spread of tumour. 2

b. What are different modes of spread of tumours? 2

c. Name two malignant mesenchymal tumors Chondrosarcoma & fibrosarcoma. 1

Q-No: 9. A 60 years old diabetic patient was admitted to the hospital for the treatment of diabetic foot. His blood was cultured, which revealed Staphylococcus epidermidis showing high level of resistance to a wide range of a antibiotics:

a. In this situation, will this bacteria act as flora or pathogen? Explain. (1.5)

b. Give the importance of lactobacillus as normal flora. (1.5)

c. Write two mechanisms of antibiotic resistance. (2)

enzymatic degradation of antibacterial drugs

alteration of bacterial intens

Q-No: 10. A 27 years old mother gave birth to her first child. The father is homozygous RhD positive and the mother is homozygous RhD negative. Her baby is born without any complications and she was not administered anti Rh IgG. 15 months later she gave birth to her 2nd child, who is anemic, slightly jaundiced and has an enlarged spleen and liver.

a) Which type of hypersensitivity reaction describes this condition? Type II. 1

b) Give the immunological basis of this condition in this patient. 2

c) Give two other example of this type of hypersensitivity. Myasthenia gravis, Autoimmune hemolytic anemia. 2

Q-No: 11. A 60 years old man presented with severe chest pain after doing a long jog. He is also diabetic. He is taken to emergency and thrombolytic therapy is given.

a. What is a thrombus? Name different factors involved in its formation. 0.5+1.5

b. What are different types of Embolism? 3

Q-No: 12. A 29-year-old female is brought to the hospital with history of delirium, sustained fever of up to 102°F for the last 2 days, headache, myalgia and constipation which began 11 days back. Physical examination revealed enlargement of spleen as well as the liver, diffuse abdominal tenderness & peculiar 'rose spots' on the chest and neck. Colonies of a Gram-negative non-lactose fermenting rods are seen. The physician asks for a stool sample to complete the diagnosis. Typhoid Fever

Salmonella typhi

a) Which organism is most likely to be identified in her stool to cause the disease? 1

b) What is the pathogenesis of the disease? 2

c) Discuss the laboratory diagnosis. 2

Q-No: 13. A 45 years old lady presented with abnormal uterine bleeding. Ultrasonography reveals an adenocarcinoma.

a. Write down differences between benign and malignant neoplasm by which this tumour can be categorized. 3

b. Name 2 benign epithelial tumours and 2 malignant mesenchymal tumours. 2

Q-No: 14. A 20 years old farmer develops periodic bouts of fever with chills and rigors occurring every 36-48 hours. He is anemic on appearance and has splenomegaly. His peripheral smear shows crescenteric structures.

a) What is the most likely diagnosis? Malaria. 1

b) How will u diagnose this case in laboratory? Giemsa stained smears, hemozoin pigment

c) What are its complications? anemia, blackwater fever, hemolysis, hepatitis, neurosis.

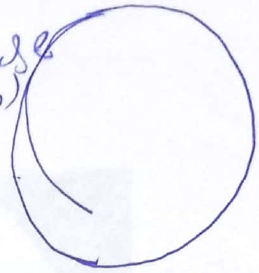
Q-No: 15. Define mutation.

a) What are different types of mutations? 2

b) Name three chromosomal disorders with associated genetic mutations. 3

C5a, C4a, C3a → Stimulate histamine → vasodilation
C5a → Chemotactic agent
C5a → Activate lipoxygenase
C3b → Phagocytosis
MAC → Lysis of microbes

(b)



Sendup 2019

Department of Pathology
... Medical College
Sent up 2019
MBBS 3rd Year (SEQ) Sendup 2

Time Allowed: 2 hour | Total Marks: 75

Name: ...
Roll No: F16-078
Date: 3-Sep-2019

Instructions:
1. All subjective questions are to be attempted on the paper and returned to the invigilator within specified time after you have received the question paper.
2. Neat hand writing and use of margins will increase the outlook and presentation of your paper.

Attempt all Questions. Each Question carries 5 marks

1. A young male presented with severe cramping abdominal pain, fever and passage of scanty stool containing blood and mucus. A parasitic infection suspected.
   a) What are the most probable disease and the organism. What are the extra intestinal manifestations of the parasite? (2)
   b) Draw the cyst and trophozoite form of the parasite (1)
   c) Draw the life cycle of plasmodium falciparum. (2)

2. A 10 years old boy is brought to pediatrician with complaints of weakness, fever, malaise and passing of low quantity of brownish urine. The urine microscopic examination was positive for RBC casts ... Mother gives history of child having a severe attack of cellulitis 2-3 weeks back. On culture the organism was beta hemolytic gram positive streptococci.
   a) Name the causative agent and disease. (1)
   b) What is the mechanism of the disease? (1)
   c) Give its laboratory diagnosis. (3)

3. A 42 year old chronic smoker presented with a history of productive cough, night sweats, and low grade fever and weight loss for the last 3 months. Chest X-ray reveals ... city in the upper zone of the left lung. Biopsy revealed granulomas.
   a) What are the most likely causative agent & the disease? (0.5)
   b) Name the special staining technique used for the diagnosis (0.5)
   c) What is the pathogenesis of disease? (2)
   d) Discuss the laboratory diagnosis. (2)

Amoebic dysentery

Extraintestinal manifestations of Entamoeba histolytica
* Amebic liver abscess
Pulmonary
Cardiac and brain involvement

fever

Special Bacteriology

Streptococcus pyogenes
Rheumatic fever

Immunological reactions b/w ...

118 page

cough, night sweat

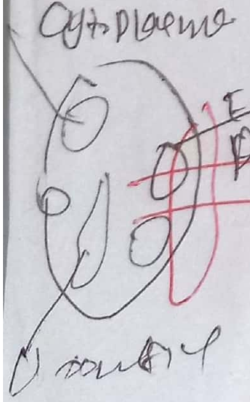
→ Mycobacterium

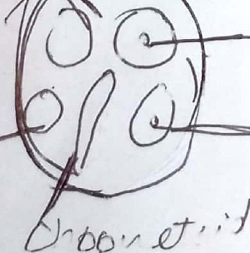
(Zn staining) → Zn staining

Q No: 03 Productive cough, night sweat, low grade fever, weight loss

Showing the long, slender red color colonies.

(d) Biochemical Test
Tuberculin Skin Test
Luciferase Assay
Interferon gamma release assay.





Q No: 01 (b)
Cytoplasm
Even peripheral chromatin
Nucleus
Karyosomes
Chromatoid bar

Q No: 02 (a)

① Laboratory Diagnosis: Culture of swab from the pharynx or the lesion on the blood agar shows the small, translucent colonies.
② Hydrolyze hippurate causes the production of the protein.
③ Rectal and vaginal swab.

THE SUPERIOR COLLEGE, LAHORE

3rd PROFESSIONAL MBBS

Annual EXAMINATION 2018

PATHOLOGY

(SEQ's)

Roll No. F15-092

Time Allowed: 2 hours

Total Marks: 75

Instructions

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

Q-No: 1. A 45-year-old man is referred because of a recent diagnosis of hereditary hemochromatosis.

a) Which pigment is accumulated in such a condition?

b) Enlist any FOUR other intracellular accumulations with their associated diseases.

Q-No: 2. A 12-year-old boy presents with a 24-hour history of severe abdominal pain, nausea, vomiting, and low-grade fever. The pain is initially periumbilical in location but has migrated to the right lower quadrant of the abdomen. With maximal tenderness elicited at a site one third between the rest of the ileum and the umbilicus (McBurney point).

a) What is the type of inflammation?

b) Enlist functions of all major complement proteins in inflammation.

Q-No: 3. A 47-year-old man presents with pain in the mid portion of his chest. The pain is associated with eating and swallowing food. Endoscopic examination reveals an ulcerated area in the lower portion of his esophagus. Histological sections of tissue taken from this area reveal an ulceration of the esophageal mucosa that is filled with blood, fibrin, proliferating blood vessels, and proliferating fibroblasts.

a) Which term would best define such tissue?

b) Enlist any TWO major differences between Primary and secondary healing.

Q-No: 4.

a) Enlist any THREE Tumor suppressor genes with their associated Tumors.

b) How does a p53 gene work? Briefly describe in your own words.

WT1 — lung cancer.

Rb1 - Small cell lung carcinoma.

DCC - colorectal cancer.

blood lymphocytes.

Indications: Multiple congenital Anomalies

- Suspected Aneuploidy
- Suspected Fragile X Syndrome
- Infertility

Department of Pathology
Azra Naheed Medical College
Send up Examination 2017
2nd Professional MBBS SEQs

Aneeka

Pathology

Time Allowed: 2 hours

Total Marks: 75

Q-1 A 37 years old male, having Pulmonary tuberculosis has a granuloma formation with a particular form of necrosis evident in the granuloma.

a- What is this type of necrosis? 1 Caseous necrosis

b- Enlist all necrotic types with 1 example of each. 2 P#36

c- Write down differences between reversible and irreversible injury 2 Back.

Q-2 Write down the mechanism of neutrophil arrival at the site of tissue insult. 2 P#64

b- A 25 year old man is having cavitating lung lesion. Describe the cross talk between macrophage and lymphocyte for formation of a granuloma and draw a granuloma. 2 P#84

c- Name two granulomatous lesions 1 - Leprosy - T.B → on last Page

Q-3 A 53 years old male had a cut injury on his fore arm which healed over a period of time with formation of scar tissue followed by compete restoration and repair. What is the mechanism of tissue regeneration and repair? 2 Healing

b- Eneumerate factots affecting wound healing 3 P#93

Q-5 A 50 year old lady had severe accident, her pulse was rapid and thready, blood pressure was 100/70. Give the the most possible pathophysiological phenomenon occurring in this patient. Describe its different phases. 2.5 Shock P#118

b- Give differences between red and white infarct. What is the fate of an embolus. 1,1.5 P#114

→ Propagation
→ Embolization
→ Dissolution
→ Organization & recanalization.

Q-6. a- Name two different techniques to diagnose pre birth genetic derangements. 1 Amniocentesis / Chorionic Villus Sampling

b- What are differences between autosomal dominant and autosomal recessive disorders. 1.5

c- Give 4 phenotypical features of Down Syndrome with genetic derangements. 2.5

- Mental retardation
- Congenital heart disorders
- Epicanthic folds and flat facial prominence
- Abundant neck skin
- Umbilical hernia
- Simian palmar crease
- Wide-set ears

Q-7 How does a tumour spread from one place to another give diagrammatic representation. 1.5 P#221

Prenatal = It is performed on cells amniocentesis, chorionic villus, biopsy maternal or umblical cord blood

Indication: - Advanced maternal age

→ Fetal abnormalities anomalies observed on ultra sound.

→ Chromosomal abnormality affecting previous child.

Q-No: 10. Poliomyelitis being an acute and having serious effects on CNS. In spite of a very large campaign it is still not possible to eradicate the disease completely in Pakistan.

a) What different types of polio vaccines so far have been used for the prevention and control of this disease? 2

b) Compare the advantages and disadvantages of killed and live polio vaccines. 3

Q-No: 11. A 65 years old man is diagnosed with malignancy of liver. His occupational history revealed that he had been working with vinyl chloride in a plastic industry.

a) What is the most likely malignancy? 1

b) Name four occupational cancers with associated carcinogens. 4

c) Name four oncogenic viruses. 4

Q-No: 12. Compare features of autosomal dominant with autosomal recessive disorders. 5

Q-No: 13. An 85 years old male admitted in emergency with paraplegia dies suddenly. On autopsy cause of death was declared as pulmonary embolism. Source of embolus was deep vein thrombus in the leg vein.

a) What is the pathogenesis of thrombus formation in this patient? 3

b) Briefly describe the fate of thrombus. 2

Q-No: 14. A patient with suspected brain abscess was admitted in neurosurgery ward. The abscess was drained and pus was sent for culture and sensitivity. The isolate on blood agar is beta haemolytic gram positive cocci with positive catalase and coagulase test.

a) What is the most likely organism? 1

b) Name any four other typical disease produced by this organism. 2

c) Enumerate any two cell wall component with their importance in pathogenesis. 2

Q-No: 15. A 15 year old pathan boy presented with history of fever, wt loss, multiple nodules over skin with dark discoloration of skin, on examination he had mild splenomegaly and his CBC revealed anemia and thrombocytopenia.

a) What is your most likely diagnosis? 1

b) How will you confirm your diagnosis? 4