

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

42
 35
 87
 90
 20
 22
 70
 35
 10
 40
 60
 75

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.

Cellular Inflammation

- a- What is this type of necrosis? 1 Caseous necrosis 4 ✓
- b- Enlist all necrotic types with 1 example of each. 2 13/Key to VHS 14 ✓
- c- Write down differences between reversible and irreversible injury 2

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

cellular events

d- 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

Suprageno Robino

Q-3. Name two granulomatous lesions 1 TB, leprosy, Tay Sach disease, Sarcoidosis

(NO. 036) epithelial degeneration with the minimal scars. → 2/Phases: - Hemotous water phils, 40 Page 3 days 5. macrophage 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 complete restoration and repair. what is the mechanism of tissue regeneration and repair? 2

86 page

1st intension (90)

Infection, Diabetic, Nutritional

b- Enumerate factors affecting wound healing 3

(2) → Infection, nutrition, foreign bodies, poor perfusion, g.

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 Hypovolemic shock

1) Non-progressive, 2) Progressive, 3) irreversible stage. PEDD

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

lungs, liver, 1) venous occlusion, 2) arterial occlusion = Kidney, spleen, heart
 2) dual supply | 2) end-arterial organs
 = genetics
 ultra sound, X-rays.

Q-6. a- Name two different techniques to diagnose pre birth genetic derangements. 1

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

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

metastatic spread of the tumour.



oncogenes which are found in the blood, elevated by the oncogene type 8 (Neoplasmin)

b- What are tumour markers, give 4 tumour markers. 1.5

① CA15-0 onco en
CA15-3 breast
CA199 Pancreatic duct

c- What are paraneoplastic syndromes, give 3 examples 2

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

Immunity

parento type I 206

Q-9 a- Draw life cycle of plasmodium 2.5
b- Draw the eggs of:

- 1- Schistosoma mansoni 2.5
- 2- Schistosoma hematobium 465 450
- 3- Ascaris lumbricoides P# 460 460
- 4- Giardia lamblia 414
- 5- Taenia solium P# 456 440

key points

1 206 2.5

Q-10 a- Write down the mechanism of bacterial resistance of drugs. Give Examples. 2
b- what are different phases of bacterial growth curve. 1

By passage 87

c- Define the term bacteriostatic and bactericidal 2

4 Gene

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

- a- Name the most likely etiological agent 1. vibrio cholerae
- b- Give pathogenesis and lab diagnosis of this 3
- c- Write down 2 differences between endotoxin and exotoxin 1

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 and causes the tetanus
- b- Name 3 other bacterial species of genus with diseases caused by these organisms. 3
- c- Another new born developed meningitis and died next day. Name two organisms responsible for the disease. 1 E. coli and listeria monocytogenes

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?

10. cpl
11. A:
12. Defin
13. A 25 yr
14. A 25 yr
15. A 25 yr

16. A 25 yr
17. A 25 yr
18. A 25 yr

- a. What fungal infection can cause this disease? 1
- b. What is the condition patient suffering from? 0.5
- c. What are the other presentations of infection with this fungus? 1.5
- d- Name fungal disorders common in immunocompromised patients 2

Q-14 a) Describe pathogenesis and the clinical spectrum of infection by dengue virus? 2.5

(Virology)

- b) How will you confirm diagnosis in laboratory? ^{CBC, WBC, platelets, hematocrit} 1.5
- c- Name 2 oncogenic viruses with associated tumours. ^{Virus isolation, AL → dec, could function tests} 1

HIV → AIDS
 HBV, HCV, HPV, EB

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 38°C. 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

Rheumatic fever =

Scarlet fever =



THE SUPERIOR COLLEGE, LAHORE

2nd PROFESSIONAL MBBS
Annual EXAMINATION 2017
PATHOLOGY

(SEQ'S)

Roll No. _____

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.
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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? *Atrophy* 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. *case's ecous* 1
- b- What are sequence of events during the process of inflammation? *→ Migration* 3
- c- Name two types of granulomatous inflammation. *as Boer* 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? *book & overexposed to radiation beyond its boundaries* 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. *Staphylococcus aureus (normal flora of skin)* 2

Q-No: 5. A child is brought to a doctor and he notices that the baby has flat facies, epicanthal folds, Siamese crease, umbilical hernia, and hypotonia with increased gap between 1st and second toe

- a- What is the most likely diagnosis? *Down syndrome* 1
- b- Give its genetic make up *45,XO* 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? *Type I* 1
- b- Draw a table and write down different types of hypersensitivity reactions with their immunomechanisms. *(Slides) & key points* 4

Save to Q no: 08 of the

send up 20/11

P.T.O

→ seeding
 Big → Central monitor
 of stress in cell and can

Neoplasia

Q-No: 7. a. Define following terms

- I. Metaplasia
- II. Carcinoma In-situ
- 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. 221

- a- Draw and label the mechanism of spread of tumour. 2
- b- What are different modes of spread of tumours? 1
- c- Name two malignant mesenchymal tumours. 192

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 antibiotics: (1.5)

- a- In this situation, will this bacteria act as flora or pathogen? Explain. (1.5)
- b- Give the importance of lactobacillus as normal flora. (2)
- c- write two mechanisms of antibiotic resistance. (2)

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. (1.5)

- a) Which type of hypersensitivity reaction describes this condition? Type II (1.5)
- b) Give the immunological basis of this condition in this patient. Ab mediated hypersensitivity type II
- c) Give two other example of this type of hypersensitivity. 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. 107 0.5+1.5

- a- What is a thrombus? Name different factors involved in its formation. 3
- b- What are different types of Embolism? 112

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. S. 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? Paper 2
- c) Discuss the laboratory diagnosis. Paper 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. Pages 3
- b- Name 2 benign epithelial tumours and 2 malignant mesenchymal tumours. 192 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 crescentic structures.

- a) What is the most likely diagnosis? Malariae 1
- b) How will u diagnose this case in laboratory? → Giemsa stain smear 2
- c) What are its complications? → ELISA 2

Q-No: 15. Define mutation.

- a) What are different types of mutations? → PCR 2
- b) Name three chromosomal disorders with associated genetic mutations. Papers 2

- 1) Black water fever
- 2) Splenomegaly
- 3) Cerebral malaria
- 4) anaemia

Key 2
 UHS
 PIC

Gram -ve rods



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8 (b) → Lymphatic
 → Hematogenic
 → Seeding within body cavity

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Net ←

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Key 2
 UHS
 Pic

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Gram
 -ive
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- 4) Hemolysis

4
M. HASNAIN NAZAR

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

FAHAD
ASLAM

F17-129
M. Rinuan

Time Allowed: 1 hours

Total Marks: 60

1. 22 years old female has a congenital anemia that has required multiple transfusions of RBC's for any years. On examination, she has no specific findings, however liver function tests show reduced amount of albumin. Liver biopsy specimen would reveal brown color substance in hepatocytes. What is the most likely substance

- a. Steatosis in hepatocytes
- b. Bilirubin in canaliculi
- c. Glycogen in hepatocytes
- d. Amyloid in portal triads
- e. Hemosiderin in hepatocytes.

Hemosiderin in hepatocytes
Brown color
embolism

2. 55 years old obese male experienced an episode of chest pain 6 hours before his death. A histological section of left ventricular myocardium taken at autopsy showed a deeply eosinophilic staining area with loss nuclei and cross striations in myocardium. There was no hemorrhage or inflammation. Which of the following caused the above mentioned?

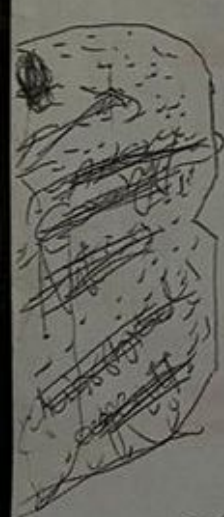
- a. Viral infection
- b. Coronary artery thrombosis
- c. Blunt chest trauma
- d. Antibodies against myocardium
- e. Protein deficient diet

Coronary artery thrombosis

3. A 70-year-old man with hypercalcemia died suddenly. At autopsy, microscopic examination showed noncrystalline amorphous deposits of calcium salts in gastric mucosa, renal interstitium, and alveolar walls of lungs. Which of the following conditions would most likely explain these findings?

- a. Metastatic calcification →
- b. Dystrophic calcification →
- c. Aging →
- d. Normal process →
- e. Generalized atherosclerosis →

FAHAD
ASLAM



Person
Person

Sign

Signature

4. A tissue preparation is experimentally subjected to a hypoxic environment. The cell in this tissue began to swell and chromatic material to clump. ATP production decreases. Which of the following ion released from mitochondria leads to these findings and to cell death?

- a. Calcium
- b. Chloride
- c. Bicarbonate
- d. Potassium
- e. Na

Calcium Calcium

5. A 23 year old female experiences onset of menstrual bleeding on day 28 of her menstrual cycle. It lasted for 6 days. Which of the following processes is occurring most likely in her endometrium?

- a. Apoptosis
- b. Caseous necrosis
- c. Heterophagocytosis
- d. Atrophy
- e. Liquefactive necrosis

Apoptosis Apoptosis

6. A 37 year old man presents with a cough, fever, night sweats, and weight loss. A chest x-ray reveals irregular densities in the upper lobe of his right lung. Histologic sections from this area reveal caseous necrosis surrounded by rare acid-fast bacilli and a few scattered giant cells. These giant cells result from the fusion together of what type of cell?

- a. Activated macrophages
- b. Atypical lymphocytes
- c. Endothelial cells
- d. Epithelial cells
- e. Reactive fibroblasts

Activated macrophages

7. During acute inflammation histamine-increased vascular permeability cause the formation of exudates (inflammatory edema). Which of the following cell types is most likely to secrete histamine and cause this increased vascular permeability.

- a. Endothelial cells
- b. Fibroblasts
- c. Lymphocytes
- d. Mast cells
- e. Neutrophils

Mast cell
mast cells

ast
cell

3. A 49 year old man develops an acute myocardial infarction because of the sudden occlusion of the left anterior descending coronary artery. Which of the following types of necrosis should be present in these areas of infarction?

- AMI
- a) Coagulative necrosis (infarction, coagulative necrosis, ...)
- b) Liquefactive necrosis
- c) Fat necrosis
- d) Caseous necrosis
- e) Fibrinoid necrosis

9. A 35 years old female has arthralgias for which she is prescribed Aspirin. Although her joint pains is alleviated, the inflammatory process itself persists. Which pain mediator is inhibited by Aspirin?

- a. Complement
- b) Prostaglandins
- c. LTE4
- d. Histamine
- e. Nitric oxide

Prostaglandins

10. You are asked to review an electron micrograph of a section of liver from a chronic alcoholic. Which of the following is an indicator of irreversible injury?

- a. Cellular edema
- b. Chromatin clumping
- c. Mitochondrial swelling
- d. Myelin figures
- e) Rupture of plasma membrane

11. An 18 year old youth lacerated his left hand and required sutures. They were removed 1 week later. Site became disfigured with prominent raised nodular scar that developed over next 2 months. Which of the following best describes the process that occurred in this 2 months period?

- a. organization
- b. dehiscence
- c. resolution
- d) Keloid formation
- e. secondary union

12. An experiment involves factors controlling wound healing. Skin ulceration are observed and the factors involved in healing process are analyzed. Which of the following factor is most likely to be effective in promoting angiogenesis?

- a. Platelet derived growth factor
- b. Epidermal growth factor
- c) Basic fibroblast growth factor
- d. Endostatin
- e. Interleukin 1

new

Basic =>
Fibroblast =>
Growth =>

new

13. An elderly male with a history of recurrent gram negative urinary tract infection, presents with fever, tachycardia, mental obtundation, and low blood pressure. Which of the following forms of shock is most likely?

- a. Anaphylactic shock
- b. Cardiogenic shock
- c. Hypovolemic shock
- d. Neurogenic shock X
- e. Septic shock

Cardiogenic shock

14. A 67 years old male, known case of diabetes mellitus, dies of MI. autopsy of aorta reveals that blood vessel had an embolus. Which of the following conditions must have been associated with his aortic disease during his life time?

- a. Renal infarction
- b. Pulmonary thromboembolism
- c. Edema of left leg
- d. Thrombocytopenia
- e. Popliteal artery occlusion

47XX 2L + 18ang

15. The left hand of an infant born at 38 weeks gestation has a single palmar flexion crease and a single flexion crease on the 5th digit. The infant is small for gestational age. The woman had 1 abortion previously as well. Which of the following chromosomal abnormalities is most likely present?

- a. 45 X
- b. 47 XX 21
- c. 47 XY 18
- d. 69 XXY
- e. 47 XXY

47XX 21

acv

16. A 14 years old boy has been drinking lots of fluids and has been eating laboriously. Labs reveal hyperglycemia. Which of the following is the inheritance pattern of this disease?

- a. Autosomal dominant
- b. Multifactorial
- c. X-linked recessive
- d. Mitochondrial DNA
- e. Autosomal recessive

Autosomal

17. A 64 year old man presents with symptoms of anemia. On work-up, you discover that the patient has been losing blood from the GI tract secondary to a tumor mass in his colon. The pathology report from biopsy specimen indicates that this mass is invasive adenocarcinoma.

Autosomal dominant

Which of the following histologic appearances is most likely to be seen in a biopsy specimen taken from this tumor mass?

- a) A uniform proliferation of fibrous tissue
- b) A disorganized mass of proliferating fibroblasts and blood vessels
- c) A disorganized mass of cells forming keratin
- d) A uniform proliferation of glandular structures
- e) A disorganized mass of cells forming glandular structures

18. A 35 year old man presents with the new onset of a "bulge" in his left inguinal area. After performing a physical examination, you diagnose the bulge to be an inguinal hernia. You refer the patient to a surgeon, who repairs the hernia and sends the resected hernia sac to the pathology laboratory along with some adipose tissue, which he calls a "lipoma of the cord". The pathology resident examines the tissue grossly and microscopically and decides that it is not a neoplastic lipoma, but instead is noneoplastic normal adipose tissue. Which one of the following features should be present to make the diagnosis of lipoma rather than normal adipose tissue?

- a) Anaplasia
- b) Fibrous capsule
- c) Numerous mitoses
- d) Prominent nucleoli
- e) Uniform population of cells

(New)
Fibrous capsule

Fibrous capsule

19. A 6 year old African boy develops a rapidly enlarging mass that involves the right side of his face. Biopsies of this lesion reveal a prominent "starry sky" pattern produced by proliferating small, noncleaved malignant lymphocytes. Based on this microscopic appearance, the diagnosis of burkitt's lymphoma is made. This neoplasm is associated with chromosomal translocations that involve which one of the following oncogenes?

- a) Bcl-2
- b) C-abl
- c) c-myc
- d) erb-B
- e) N-myc

(New)
C-myc

20. The product of the p53 anti oncogene is a nuclear protein that regulates DNA replication and prevents the proliferation of cells with damaged DNA. It does this by stopping the cell cycle at what point?

- a) Between G1 and S
- b) Between G2 and M
- c) Between M and G1
- d) Between S and G2

Between G1 and S

Mean Do. Sastre

e) During G3

21- A 76 year old man farmer presents with a 2 cm mass on the left side of his forehead. A biopsy reveals squamous cell carcinoma. Which one of the following causes the formation of pyrimidine dimers in DNA and is associated with the formation of squamous cell carcinoma?

- a) Aflatoxin B1
- b) Vinyl chloride
- c) UVC
- d) UVB**
- e) Epstein-Barr virus

UVB

22 A 27 years old female's routine pap smear reveals abnormality. Biopsy shows disorderly cellular arrangement in epithelium of cervix and the cells are invading basement membrane. She also gives history of multiple sexual partners. Which of the following is most likely diagnosis?

- a. Adenocarcinoma
- b. Squamous cell CA**
- c. Hamartoma
- d. Melanoma
- e. Mesothelioma

Squamous cell CA

23. A 56 years old man with history of chronic alcoholism has notice weight loss of about 6 kgs in last 5 months. Ultrasonography reveals a mass in liver. Alpha fetoprotein levels are raised in blood. What is the most likely Diagnosis?

- a. Prostatic CA
- b. Lung CA
- c. Multiple Myeloma
- d. HCC**
- e. Pancreatic CA

HCC

HCC

24- A 22 year old second year medical students develops a "red" face after being asked a question during lecture. Which of the following statements best describes this vascular reaction?

- a) Active hyperemia**
- b) Acute congestion
- c) Non-palpable purpura
- d) Passive hyperemia
- e) Petechial hemorrhage

Active hyperemia

25- During the autopsy of a 46 year old man who died when the motorcycle he was riding was hit by a truck, a 1-1.2 cm red mass is found within a branch of the left pulmonary artery. This mass is rubbery, gelatinous, and has a "chicken fat" appearance. Histologic sections reveal that this mass is not attached to the wall of the pulmonary artery, and alternating lines

of Zahn are not seen. Which of the following statements best describes this intravascular mass?

- a) Postmortem blood clot *post mortem blood clot*
- b) Postmortem hematoma
- c) Premortem embolic blood clot
- d) Premortem non-embolic thrombus
- e) Premortem non-thrombotic embolus

26-A patient is given a penicillin injection following which she develops rash and dyspnea within 5-10 minutes of injection. The most likely mode of reaction would be

- a) Type-I hypersensitivity
- b) Type-II hypersensitivity
- c) Type-III hypersensitivity
- d) Type-IV hypersensitivity
- e) Hemolysis

27 In the gram stain procedure, bacteria are exposed to 95% alcohol or to an alcohol/acetone procedure. This step is performed to:

- a. Adhere cells to slide
- b. Retain purple dye within bacteria
- c. Disrupt outer cell membrane so that the purple dye can leave bacteria
- d. To form complex with iodine soln.
- e. To facilitate entry of purple dye into gram negative bacteria

28- Several bacteria that form spores are important human pathogens. Which of the following is accurate about spores?

- a. Killed by boiling
- b. Produced by gram negative only
- c. Formed on exposure to antibiotics
- d. Produced by anaerobes
- e. Metabolically inactive yet can survive for years in inactive state

29- Microorganisms are cellular structures. They can grow and reproduce. Which of the following mechanism is mostly used by Bacteria to divide?

- a. Mitosis
- b. Meiosis
- c. Both meiosis & mitosis

~~Binary fission~~
Binary fission & mitosis

(D. Sadia)

30. A 76 years old elderly female come to you after she started feeling pain in her prosthetic hip joint and developing fever. Suspecting *S. Epidermidis* infection, what is the most likely source of this organism?

- a. Dental plaque
- b. Mouth
- c. Skin
- d. Stomach
- e. Vagina

skin

(New)

31. Which bacteria produces an exotoxin that inhibits release of acetylcholine at Neuromuscular junction?

- a. *Bacillus anthracis*
- b. *Dordetella pertussis*
- c. *Clostridium botulinum*
- d. *Corynebacterium diphtheria*
- e. *E coli*

(D. Sadia)

32. A 34-year-old woman who works in a bird farm presents with a history of fever, cough and on X-ray chest has consolidation in right lower lobe. Her sputum is sent for laboratory analysis. The likely means by which the patient acquired her infection is:

- a. Sexual activity
- b. Ingesting the microorganisms via food
- c. Breathing aerosolized droplets containing the microorganism
- d. Vertical transmission
- e. Through skin contact

(New)

33. Opsonization is the process by which:

- a. Bacteria are made more easily phagocytosed
- b. Chemokines attract neutrophils
- c. Neutrophils migrate from blood through endothelium to reach site of ingestion
- d. Acute phase response induced
- e. Alternate pathway of complement activated

(New)

34. Super antigen produced by *S. aureus* is involved in pathogenesis of which 1 of the following diseases?

- a. Impetigo
- b. Osteomyelitis
- c. Scalded skin syndrome

(New)

d. Septicemia

Toxic shock syndrome

Toxic shock syndrome

35. A staff nurse collects all contaminated sheets, gloves, masks and caps from operation theater after appendectomy. She sterilizes all objects to reuse them. Which technique is most appropriate to get rid of bacteria and spores:

- a. Boiling them at 100 degrees C
- b. Tyndalization
- c. Inspissation
- d. Autoclaving
- e. Pasteurization

36. Which of the following is best to treat a skin necrotizing infection caused by MRSA?

- a. Coagulase
- b. Enterotoxin
- c. Exfoliatin
- d. Leukocidin

Vancomycin

Vancomycin

37. Eight of 10 family practice residents who had a potluck 4 days ago now have diarrhea with abdominal cramps, general malaise, and fever ranging from 37.5 degree C to 38.7 degree C. Stools from 3 are blood tinged. Lab studies revealed the causative agent was a microaerophilic gram negative, curved rod with polar flagella often in pairs to give a seagull appearance. It grew on special media at 42 degree C the original contamination was probably found in

- a) Poultry
- b) Improperly canned food
- c) Fried rice
- d) Fish
- e) Vegetables

38. Which of the following is the large gram positive rod that causes necrosis of tissue by producing an exotoxin that degrades lecithin, resulting in lysis of cell membranes?

- a. Bacillus anthracis
- b. Bacillus cereus
- c. Clostridium perfringens
- d. Corynebacterium diptheria
- e. Listeria monocytogenes

Clostridium perfringens

39. A child was suffering from high grade fever, chill, respiratory distress and pain in left chest when he coughed. His sputum was thick, rusty colored, and his chest examination showed normal movement of diaphragm. There was dullness to left lateral posterior chest, suggesting consolidation of the lung. A culture was inoculated on blood agar, growth obtained showed alpha

Clostridium perfringens

haemolysis. Smear prepared for Gram staining showed Gram positive lanceolate shape capsulated diplococci. The organism most probably is:

lanceolate
lanceolate

- a. Staphylococcus aureus
- b. Pseudomonas aeruginosa
- c. Streptococcus pneumoniae
- d. Streptococcus pyogenes
- e. Streptococcus viridians

40. A 37 years old male is known to be HIV positive and has reduced T-cell count. His X-Ray shows a granuloma formation in his upper lobe of one lung.

↑
reduced T-cell count

The most probable bacteria is:

- a. Staph aureus
- b. Strept. Pneum
- c. Corynebacterium Diphtheria
- d. Cryptococcus neoformans
- e. Mycobacterium tuberculosis

New

41. A previously healthy 11-year-old girl develops a gastrointestinal infection with cramping and watery stools. After several days, she begins to pass blood per rectum, and is hospitalized for dehydration. In the hospital, she is noted to have decreasing urine output with rising blood urea nitrogen (BUN). Total blood count reveals anemia and thrombocytopenia, and the peripheral smear is remarkable for fragmented red cells (schistocytes). Infection with which of the following bacterial genera is most likely responsible for this syndrome?

- a. Campylobacter
- b. Clostridium
- c. E. coli
- e. Vibrio

(New)

42. A 25-year-old man presents with a high fever and generalized malaise. His condition deteriorates so rapidly that his friends decide to take him to the emergency department 24 hours after the onset of symptoms. He has a history of intravenous drug abuse. A test for anti-HIV antibodies is negative. Physical examination reveals a systolic murmur, and echocardiography shows bulky vegetations attached to the tricuspid valve leaflets. Which of the following microorganisms will be most likely be isolated from this patient's blood cultures?

(New)

- a. Candida albicans
- b. Hemophilus influenzae

- c. *Staphylococcus aureus*
- d. *Staphylococcus epidermidis***
- e. Viridans (α-hemolytic) streptococci

43- Which of the following organisms is the most common cause of **community-acquired pneumonia?**

- a. *Chlamydia pneumoniae*
- b. *Haemophilus influenzae*
- c. *Mycoplasma pneumoniae*
- d. *Staphylococcus aureus*

e. *Streptococcus pneumoniae*

(New) Streptococcus pneumoniae

44- A 20-year-old female presents with a two day history of dysuria and increased urinary frequency. She states that she was recently married and was not sexually active prior to the marriage. Physical exam reveals a temperature of 100.7 °F with normal vital signs. Gynecological exam reveals no evidence of discharge, vaginitis, or cervicitis. Urinalysis reveals 14 white blood cells per high-powered field with many gram-negative rods. The most appropriate therapy would be,

- a. Ampicillin
- b. Ceftriaxone**
- c. Fluconazole
- d. Gentamicin
- e. Metronidazole

(New)

45- A 19 year boy had a severe headache which is confined to occipital region and neck. He was brought to emergency room in confused and disoriented state. Before this condition he had nausea, vomiting, difficulty in breathing and eating. Physical examination shows that airways are open and clear, BP 110/80mmHg, pulse 108/min, temperature 38.4°C. Patient had Neck rigidity. Which of the following bacterium is most likely the cause of it?

- a. *Streptococcus pneumoniae*
- b. *Haemophilus influenzae*
- c. *Streptococcus agalactiae*
- d. *Neisseria meningitidis***
- e. *Staphylococcus aureus*

Neisseria meningitidis

46- The clinical laboratory reports the presence of 0157:H7 strains of E. Coli in the blood/stools of 6 children ages 3-5 who attended a local petting zoo. These young children would be at increased risk of developing

- a) Buboes
- b) Hemolytic uremic syndrome**
- c) Infant botulism
- d) Renal stones
- e) Rice water stools

(New)

E. coli 0157:H7 = Hemolytic uremic syndrome

Handwritten notes and signatures at the bottom of the page.

(20/20/20/20/20)

47. A 50 years old male presented with severe abdominal pain. Later he also developed bloody stools with mucus. Laboratory findings and clinical tests reveals amoebiasis. Which of the following will be the most appropriate intestinal finding in this patient?

- a. Cobble stone appearance of the intestine
- b. Granulomatous inflammation
- c. Flat shaped ulcers with undermined edges
- d. Blunting of the intestinal villi
- e. Tumor like masses

48. What form of *Giardia lamblia* plays role in its transmission?

- a. Cysts
- b. Karyosomes
- c. Metacyst
- d. Trophozoites
- e. Nuclei

49. Abdominal ultrasound of a patient showed liver abscess. The pus was aspirated and examined which showed amoebic trophozoites. Which of the following is the characteristic of the liver abscess caused by amoebic dysentery?

- a. yellow colored pus containing dead bacteria
- b. Chocolate colored pus containing red blood cells and dead liver cells
- c. extensive necrosis
- d. Pus containing only *P. histolytica* cysts
- e. granulation tissue

50. A 20 years old female gave history of high grade fever after a mosquito bite. Fever occurred every third day. Examination showed pallor and splenomegaly. Benign Quartan fever is characteristic of

- a. *Plasmodium falciparum*
- b. Hookworm infection
- c. *Plasmodium ovale*

(New)

Plasmodium malariae Plasmodium malariae

e. Giardia lamblia

(New)

51. A 5 year old girl presents with a fever and a generalized macular rash that is most dense on the scalp and trunk of the body. Several waves of lesions appear, one after the other, and evolve rapidly into vesicles and then pustules over several days the most likely disease and causative agent is:

- a) Exanthema subitum due to cytomegalovirus
- b) Chicken pox due to the varicella-zoster virus
- c) Whitlow infection due to herpes simplex virus type 1
- d) Herpetic gingivostomatitis due to the varicella-zoster virus
- e) Infectious mononucleosis due to the Epstein Barr virus

(New)

52- Symptoms of headache, fever and muscle pain lasting days followed by a hour abating of symptoms is characteristic of:

- a) Yellow fever
- b) Hepatitis C
- c) Dengue fever
- d) Ebola hemorrhagic fever
- e) West Nile fever

muscle pain

53- Serologic test results from a hepatitis patient reveal anti-HBc positive, HBs Ag positive, and anti-HBs negative. The correct interpretation of the patient's status is:

- a) No longer infectious
- b) Immune to hepatitis B
- c) Evidence of resolving hepatitis B infection
- d) Hepatitis B chronic carrier state
- e) Impossible to have both surface

Wardson

Anti-HBc	+	+	+
HBs Ag	+	+	+
Anti-HBs	-	-	-

54- Several individuals in Lahore from the ages of 2-12 have come down with symptoms of nausea, vomiting and swelling of the parotid glands. Which of the following can be a complication of the above disease?

- a) Guillain-Barre
- b) Glomerulonephritis
- c) Ochritis
- d) Multiple sclerosis
- e) Reye syndrome

pink shinky

(New)

55- A 6 year old boy presents with abrupt onset of vesicles and ulcers throughout the oral cavity especially marked on the gingivae. He also has lymphadenopathy, fever, anorexia and irritability. On microscopy, there is acantholysis. Individual epidermal cells in the margins of the vesicles reveal intranuclear inclusions. They likely causative agent of the disease is:

- a) Enveloped double stranded DNA
- b) Nonenveloped double stranded DNA
- c) Enveloped double stranded RNA

(New)

(New)

- d) Naked single stranded RNA
- e) A gram negative oxidase positive diplococcus

56- which one of the following set of cells can present antigen to helper T-Cells?

- a. B cells and dendritic cells
- b. B cells cytotoxic T cells
- c. Macrophages and eosinophils
- d. Neutrophils and cytotoxic T cells
- e. Neutrophils and plasma cells

(new)

57 Which of the following features differentiates fungal cells from human cells?

- a. 80S ribosomes
- b. Presence of an endoplasmic reticulum
- c. Ergosterol as the major membrane sterol
- d. Enzymes that allow them to use carbon dioxide as their sole carbon source
- e. Presence of chloroplast

(New)

58 A girl who pricked her finger while pruning some rose bushes develops a local pustule that progresses to an ulcer. Several nodules then develop along the local lymphatic drainage. The most likely agent is

- a. *Aspergillus fumigatus*
- b. *Sporothrix schenckii*
- c. *Cryptococcus neoformans*
- d. *Candida albicans*
- e. *Mucor mycosis*

59. Aspergillosis is recognized in tissue by the presence of

- a. Metachromatic granules
- b. Pseudohyphae
- c. Septate hyphae
- d. Budding cells
- e. pseudopseudohyphae.

(new)

60 - Infection with dermatophyte is most often associated with

- a. Intravenous drug abuse
- b. Inhalation of the organism from contaminated bird feces
- c. Adherence of the organism to perspiration moist skin
- d. Fecal-oral transmission
- e. blood borne

(new)

58 = 25 + 33
60 + 25 = 85