

39. Anaphylactic shock

- a. Is seen after tuberculosis
- b. Caused by IgG
- c. Cannot lead to death
- d. Occurs as a result to reaction to penicillin
- e. Takes many days to develop.

→ 40. Approximately 30-60 minutes after being bitten by a "bug", a 26-year-old man noticed a localized swelling and erythema in the affected area. The edema is most likely the result of:

- a. Altered plasma oncotic pressure
- b. Increased arterial hydrostatic pressure
- c. Increased vascular permeability ✓
- d. Lymphatic obstruction
- e. Increased plasma protein levels.

41. A patient is scheduled to have a chronic abscess incised and drained. What would you expect microscopic examination of the contents of the abscess to most likely show?

- a. Lymphocytes and macrophages
- b. An area of caseous necrosis
- c. Any area of coagulative necrosis
- d. Neutrophils, lymphocytes, & plasma cells ✓
- e. An acute inflammatory infiltrate of PMNs

42. Which of the following would you expect to find in the alveoli in a patient with pneumococcal pneumonia of 24 hours duration?

- a. Serous inflammation
- b. Fibrinous inflammation
- c. Fibrino-purulent inflammation
- d. Suppurative inflammation ✓
- e. Serofibrous inflammation

43. A 45-year-old woman has a lung biopsy because of a 1.0 cm lesion seen on a chest x-ray. Histologic examination reveals epithelioid macrophages and lymphocytes around a focus of caseous necrosis. What is the best explanation for this form of necrosis?

- a. Granulomatous inflammation.
- b. Complement fixation
- c. Local histamine release
- d. PMNs releasing degradative enzymes
- e. Suppurative inflammation

→ 44. Which of the following events in acute inflammation occurs first?

- a. Chemotaxis
- b. Emigration
- c. Hemostasis
- d. Margination
- e. Phagocytosis

33. Alterations in normal blood flow and endothelial injury may lead to,
- Sickle cell anemia
 - Cardiomyopathy
 - Hypersensitivity
 - Thrombosis
 - None of the above
34. A detached intravascular solid, liquid, or gaseous mass that is carried by the blood to a site distant from its point of origin is known as ;
- Thrombosis
 - Embolism
 - Infarction
 - Necrosis
 - Gangrene
35. Red Infarcts occur in:
- Heart
 - Spleen
 - Kidney
 - Intestine
 - None of the above
36. A 23 years old man undergoes surgery for the fractures of pelvis after motor vehicle accident. The following day he develops dyspnea, speech difficulties and skin rash .what do u think is the cause.
- Air embolism
 - Amniotic fluid embolism
 - Fat embolism
 - Paradoxical embolism
 - Thrombotic embolism..
37. During autopsy of 46 years old man who died after motor vehicle accident. 1-2 cm mass was found within branch of left pulmonary artery. Grossly the mass is gelatinous and has a chicken aft appearance and not attached to vessel wall and lines of Zahn are absent. What is the mass actually
- Postmortem blood clot
 - Post mortem hematoma
 - Premortem embolic hematoma
 - Premortem non embolic thrombus.
 - Premortem embous.
38. Edema of the dependent parts of the body is a prominent feature of
- Brain edema
 - Congestive cardiac failure
 - Nephrotic syndrome
 - Periorbital edema
 - Pulmonary edema.

27. A 10-year-old black man with a known history of sickle cell disease presents to the emergency department complaining of left upper quadrant pain suggestive of a splenic infarct. Microscopic examination of the spleen would most likely reveal
- Caseous necrosis
 - Coagulative necrosis
 - Fibrinoid necrosis
 - Gangrenous necrosis
 - Liquefactive necrosis
28. You are asked to review an electron micrograph of a section of liver from a chronic alcoholic which of the following is an example of an irreversible injury?
- Cellular edema
 - Chromatin clumping
 - Cytoplasmic inclusions
 - Mitochondrial swelling
 - Rupture of cell membrane
29. You are asked to review a liver biopsy from a patient with history of alcohol abuse. Which of the following pathologic changes will most likely be present in this case.
- Fatty change in liver cells
 - Hydropic change of hepatocytes
 - Karyolysis in myocardial cells
 - Glycogen deposition in hepatocytes nuclei
 - lipofuscin deposition
30. The action of putrefactive bacteria on necrotic tissue results in
- Coagulation
 - Infarction
 - Gangrene
 - Embolism
 - Caseation
31. Dystrophic calcification
- Occurs in normal tissues
 - Is associated with hypercalcaemia
 - Is seen in vitamin D related disease
 - Occurs in atheromatous disease
 - May be a part of the milk alkali syndrome
32. Regarding hyperplasia which statement is correct?
- It is never seen in the same tissue as hypertrophy
 - it is seen in cardiac muscle in hypoxic patients
 - it is limited to cells capable of mitotic division
 - it is rarely physiologic
 - complete removal of excess hormone triggers will slow progression but not reverse hyperplastic changes

Q-No: 5. A 24-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? *Mycobact. tuberculosis* 2

b) What is tuberculin skin test? *Identify in Tuberculosis 3*

T.B

Q-No: 7. *T.B*

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 stain preparation and explain why? *2*

Strict aerobe
Strict anaerobe
Facultative anaerobe

Pseudomonas aeruginosa
Mycobacterium tuberculosis
Clostridium
E. coli

aerobic
anaerobic

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? *Traveler's diarrhea* 1

b) What is the most likely causative agent? *E. coli* 1

c) Give pathogenic factor and its mechanism in causing the problem. *Enterotoxigenic E. coli* 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? *Malaria - Plasmodium falciparum.* 1.5

b) Name the causative organism? *Plasmodium falciparum.* 1.5

c) Give 2 important complications of the parasite. *Cerebral malaria* 2

Clonus

Q-No: 10. Poliomyelitis by campaign it is still not...
a) What difference this disease...
b) Compare...
Q-No: 11. A...
revealed th...
a) b)



THE SUPERIOR COLLEGE, LAHORE

3rd PROFESSIONAL MBBS
Annual EXAMINATION 2018
PATHOLOGY

(SEQ's)

Time Allowed: 2 hours

Roll No. 45-186

Total Marks: 75

Instructions

1. Attempt all questions.
2. All questions 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? *hemosiderin*
- b) Enlist any FOUR other intracellular accumulations with their associated diseases. *Fat, glycogen, protein, pigments*

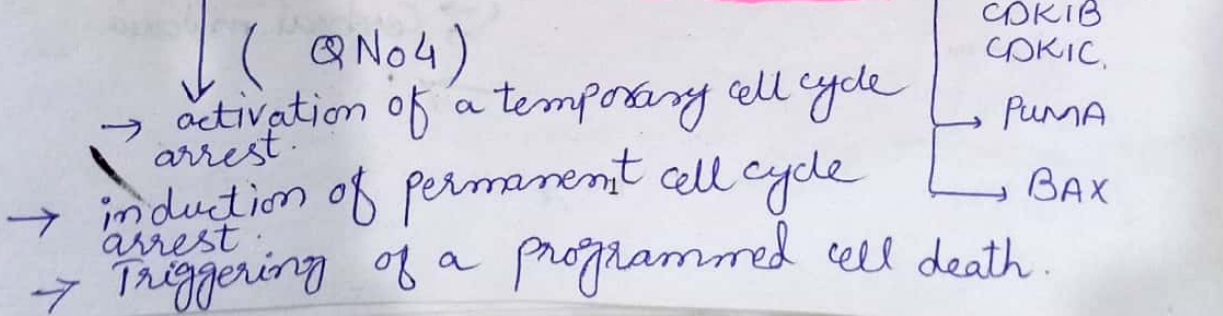
Q-No: 2. A 12-year-old boy presents with a 24-hour history of severe abdominal pain, nausea, vomiting, and low-grade fever. The pain is initially periumbilical in location but has migrated to the right lower quadrant of the abdomen, with maximal tenderness elicited at a site one third between the crest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

- a) What is the type of inflammation? *Purulent*
- b) Enlist functions of all major complement proteins in inflammation. *C3b → phagocytosis, C5a → inflammatory chemotaxis, Mac → Direct killing*

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? 2
- b) Enlist any TWO major differences between Primary and secondary healing. 3

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.



b- What are tumour markers, give 4 tumour markers. 1.5 P# 239
 c- What are paraneoplastic syndromes, give 3 examples 2 P# 237

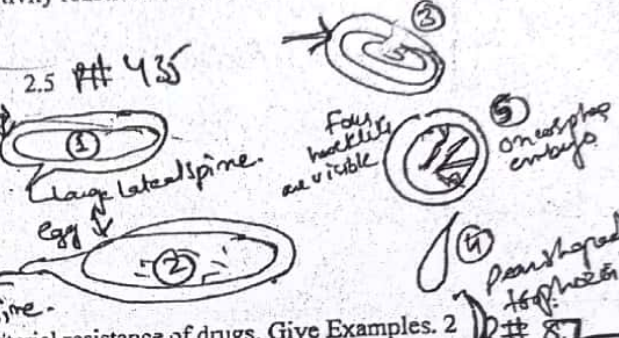
Q-8 A 31 years old female, after eating pea nuts developed severe dizziness, head ache and hypotension which resulted in fainting. Patient was rushed to the hospital and doctor diagnosed the patient having episode of anaphylaxis

a- What type of Hypersensitivity reaction did the patient experience? 1 Type I P# 857
 b- What are other types of hypersensitivity reactions? Give pathogenesis and one example of each. 4 KTU P# 168

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

b- Draw the eggs of:

- 1- Schistosoma mansoni P# 465
- 2- Schistosoma hematobium
- 3- Ascaris lumbricoides P# 476
- 4- Giardia lamblia
- 5- Taenia solium P# 56



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

b- what are different phases of bacterial growth curve. 1 Log, stationary, death.

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- Give pathogenesis and lab diagnosis of this 3 P# 159
- c- Write down 2 differences between endotoxin and exotoxin 1 KTU P# 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 P# 138.
- c- Another new born developed meningitis and died next day. Name two organisms responsible for the disease. 1 Streptococcus agalactis, E-coli, Group B streptococcus, H. 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?

Monitiation → Mucous - release → Adhesion → Cholera
 Unusual → Adhesion → Cholera
 → A B

memo 1094



Cus
Hy
Hy

Type

Answer

collections: blood lymphocytes
 Multiple congenital Anomalies
 - Suspected Aneuploidy
 - Suspected Fragile X syndrome
 - Infertility

Aneekal

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

Marginalia (b)
 Admissions
 Examination
 Chemistry

Pathology

Total Marks: 75

Time Allowed: 2 hours

injury

Q1 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 #36
- c- Write down differences between reversible and irreversible injury 2 # Back

Q2 Write down the mechanism of neutrophil arrival at the site of tissue insult. 2 #64

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 #84

Name two granulomatous lesions 1 Leprosy T.B → on last page

Q3 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 #87

b- Enumerate factors affecting wound healing 3 #93

A 50 year old lady had severe accident, her pulse was rapid and thready, blood pressure was 100/70. Give the most possible pathophysiological phenomenon occurring in this patient.

Describe its different phases. 2.5 Show #118

Give differences between red and white infarct. What is the fate of an embolus. 1.1.5

→ Propagation
 → Embolization
 → Dissolution
 → Organization & Recanalization

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

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

- Marfan syndrome
- Down's syndrome
- Cystic fibrosis
- Sickle cell anemia
- Phenylketonuria
- Tay Sachs
- Epicanthic folds
- Flat face
- Prominent nose

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

Pre-natal = It is performed on cells amniocentesis or chorionic villus biopsy maternal or umbilical cord blood

Indication: - Advanced maternal age
 → Fetal abnormalities anomalies observed on ultra sound.
 → chromosomal abnormality affecting previous child

Genetics

Genetics

21. *C. diphtheriae* causes diphtheria, a rare disease in the adults in Pakistan. *C. diphtheriae* is best characterized by which of the following statements?
- It secretes erythrogenic toxin that causes the characteristic signs of scarlet fever
 - It produces toxin that blocks protein synthesis in an infected cell and carries a lytic bacteriophage that produces the genetic information for toxin production
 - It requires cysteine for growth
 - It secretes exotoxin that has been called verotoxin and Shiga-like toxin
 - It produces at least one toxin consisting of two subunits, A and B, that cause severe spasmodic cough usually in children
22. Tetanus is a disease caused by *Clostridium tetani*. Which of the following statements is not justifying the characteristics of disease?
- Is due to an infection with a gram-negative spore forming rod
 - The organism produces a powerful endotoxin
 - The toxin prevents the release of inhibitory neurotransmitter
 - Clostridium tetani* is sensitive to penicillin
 - Risus sardonius is the typical fascial spasm
23. Which of the following Gram positive rod is weakly acid fast?
- Clostridium botulinum*
 - Actinomyces israelii*
 - Nocardia asteroides*
 - Corynebacterium diphtheriae*
 - Gardnerella*
24. A patient is admitted with severe substernal chest pain of 4 hours duration. Lab tests reveal increased level of the serum creatine kinase. This is most likely due to:
- Mitochondrial swelling
 - Nuclear lysis
 - Damage of plasma membranes
 - Increased endoplasmic reticulum
 - Increased Golgi activity.
25. You are asked to participate in a research project on myocardial infarctions in a rat model. Which of the following occurs in ischemic cell injury?
- Efflux of K^+ and Na^+
 - Influx of K^+ and Ca^{++}
 - Influx of K^+ and H_2O
 - Influx of Na^+ and Ca^{++}
 - Influx of Na^+ and K^+
26. Cell death caused by autolysis is produced by
- Antibodies
 - Endogenous enzymes
 - Phagocytic leukocytes
 - Bacterial enzymes
 - Anoxia

16. A patient presented with pseudomembranes in the throat leading to respiratory distress. The organism obtained was a Gram positive rod with metachromatic granules. Name the causative agent:
- Nocardia*
 - Actinomyces israelii*
 - Bacillus anthracis*
 - Corynebacterium diphtheriae*
 - Listeria monocytogenes*
17. A young married woman was received in gynae department with history of increased amount of thin, grey-white, fishy vaginal discharge for the last few days. Gram staining revealed clue cells. Whiff test was also positive. Which one of the following is the most likely causative agent?
- Candida albicans*
 - Trichomonas vaginalis*
 - Gardnerella vaginalis*
 - Lactobacilli*
 - Gonococci*
18. A pre-mature baby boy developed meningitis one week after birth. Mother had history of ingestion of unpasteurized milk and cheese. Gram staining of CSF revealed L-shaped Gram positive rods having tumbling motility. What is the most likely causative agent?
- Neisseria meningitidis*
 - Streptococcus pneumoniae*
 - Listeria monocytogenes*
 - Streptococcus agalactiae*
 - E. coli*
19. A patient developed Scarlet fever; characterized by skin rash with sandpaper like texture, strawberry tongue, pallor, and subsequent desquamation. The organism obtained on blood culture was Beta hemolytic, Lancefield group A. What is the causative agent?
- S. aureus*
 - S. pyogenes*
 - S. epidermiditis*
 - S. pneumoniae*
 - viridans group*
20. An immune-compromised chronic diabetic patient had to go for amputation of his foot after he developed gas gangrene. The organism isolated from the pus was a gram positive rod, showing double zone of hemolysis on blood agar and positive Nagler's reaction. Pick the causative agent:
- Clostridium difficile*
 - Corynebacterium diphtheriae*
 - Clostridium perfringens*
 - Clostridium botulinum*
 - Bacillus anthracis*

11. A patient was hospitalized after an automobile accident. His wounds became infected and treated with tobramycin, carbenicillin, and clindamycin. Five days after antibiotic therapy initiation, patient developed severe diarrhea and enterocolitis. Antibiotic associated diarrhea and the more serious pseudomembranous colitis can be caused by:
- Clostridium botulinum
 - Clostridium perfringens
 - Clostridium difficile
 - B. cereus
 - B. fragilis
12. A 65 year old male presents with cold like symptoms for at least 3 days. He also has chills, chest pain and productive cough with bloody sputum. Blood agar reveals alpha hemolytic colonies. Quelling test is also positive. Which of the following is the most likely cause?
- Corynaebacterium
 - Enterobacter spp
 - Hemophilus
 - Streptococcus pneumoniae
 - Klebsiella pneumonia
13. A 15 year old girl develops a sore throat, fever and earache of approximately 1 week duration. Upon examination by her physician an erythematous rash is noted covering most of her body and her tongue appears like a strawberry. Which of the following is most likely the cause?
- Streptococcus pyogenes
 - Staphylococcus aureus
 - Staphylococcus agalactiae
 - Streptococcus pneumoniae
 - Staphylococcus epidermidis
14. Mr. Hamid brought a canned Tuna fish to prepare burger. After eating this burger he had nausea, vomiting, diarrhea with diplopia, dysphagia, weakness of facial and respiratory muscles (descending paralysis) but no rise in temperature. Symptoms of C. botulinum food poisoning developed 36 hrs after ingestion of burger. These symptoms are consistent with:
- Invasion of the gut epithelium by C. botulinum
 - Secretion of an enterotoxin
 - Endotoxin shock
 - Ingestion of a neurotoxin causing flaccid paralysis
 - Activation of cyclic AMP
15. A young female presented with signs and symptoms of urinary tract infection. Urine culture revealed Gram positive cocci, showing catalase and coagulase test negative. Which test distinguishes S. epidermidis from Staph saprophiticus?
- Catalase test
 - Optochin sensitivity test
 - Coagulase test
 - DNase test.
 - Novobiocin sensitivity test

6. A grandmother applied cow dung to the umbilical stump of a new born boy. He developed muscular spasms and pronounced arching of the back. What is the typical means of transmission of a toxin produced by this organism, which blocks the release of inhibitory transmitter GABA and glycine?
- Eating home canned foods
 - Fecal oral, travel to foreign country
 - Infant given honey during first year of life
 - Puncture wound or road traffic accident
 - Respiratory, with incomplete vaccination history
7. Several postal workers came down with symptoms of dyspnea, cyanosis, and hemoptysis and chest pain. Chest X-ray reveals mediastinal widening. Sputum cultures are negative for all routine respiratory pathogens. Serology correctly identifies the causative agent as bacillus anthracis. Which of the following structures possessed by the causative agent is responsible for transmission of disease?
- Elementary body
 - Endotoxin
 - Periplasmic space
 - Reticulate body
 - Spores
8. Four to Five hours after eating fried rice at a restaurant, a 24 year old woman and her husband both developed nausea, vomiting, and diarrhea. Which one of the following organisms is the Most likely to be involved?
- Clostridium perfringens
 - C botulinum
 - Bacillus cereus
 - C diphtheriae
 - L monocytogenes
9. A patient complains to his dentist about a draining lesion in his mouth. A gram stain of the pus shows leukocytes, and many branching gram-positive rods. Branched yellow sulfur granules are observed by microscopy. Which of the following is the most likely cause of the disease?
- Actinomyces israelii
 - Nocardia
 - G. diphtheria
 - Propionibacterium acnes
 - S. aureus
10. After extraction of a wisdom tooth, an 18 year old male student is diagnosed with subacute bacterial endocarditis. He has a congenital heart disease that has been under control. Which of the following is the most likely organism causing his infection?
- S. aureus
 - S. epidermidis
 - S. pneumonia
 - Streptococcus viridians
 - E. faecalis