



Department of Pathology
Azra Nnhood Medical Collogo
soud up 2018
MBBS 3rd Year (MCQ)



Solved by Sanaulah.

Time Allowed: 60 min

Total Marks: 60

Name: Muazz Ali

Roll No: FIS-147

Date: _____

Instructions:

1. All objective questions are to be attempted on the paper and returned to the invigilator within specified time after you have received the question paper.
2. Any cuttings or overwriting in answering the objective part will not be accepted and no marks will be given even if the answer is correct.

1. A 20-year-old male is brought to the emergency department with a 1-day history of delirium. He had a sustained fever of up to 102°F and a history of progressive headache, myalgia, and constipation which began 10 days previously. Physical examination revealed hepatosplenomegaly, diffuse abdominal tenderness, and red rose spots on the chest and neck. Colonies of a Gram-negative bacillus that produced a characteristic "fish-eye" growth (lactose non-fermenter with sulfur reduction). What is the most likely diagnosis?
 - a. Cholera
 - b. Hemolytic uremic syndrome
 - c. Shigellosis
 - d. Tularemia
 - e. Typhoid fever ✓
2. *Escherichia coli* cause disease by a variety of different methods. Which one of the following *E. coli* types is characterized by the presence of LT (heat-labile) and ST (heat-stable) proteins?
 - a. Enteroinvasive (EIEC)
 - b. Enterotoxigenic (ETEC) ✓
 - c. Enterohemorrhagic (EHEC)
 - d. Enteropathogenic (EPEC)
 - e. *Escherichia coli* having P pili
3. A 48-year-old male has benign prostatic hyperplasia for which he gets intermittent catheterization, develops fever. The pH of urine sample is 8. The bacterium isolated from the urine is a urease-positive, highly motile, non-lactose fermenter, Gram-negative bacillus belonging to Enterobacteriaceae class. What is the most likely complication of this infection?
 - a. Deposition of antigen-antibody complexes in the glomeruli.
 - b. Formation of kidney stones ✓
 - c. Development of prostatitis
 - d. Development of epididymitis
 - e. Rapid dissemination throughout the body causing septicemia

4. A bacterium was isolated from the CSF of a newborn that died of meningitis. The vagina of the mother was colonized with the same isolate as determined by culture and sensitivity and capsular antigen testing. The microbe showed lactose fermenting colonies on MacConkey agar at ambient atmospheric conditions. What is the most likely etiologic agent?
- a. Escherichia coli ✓
 - b. Group B Streptococcus type
 - c. Hemophilus influenzae type b
 - d. Neisseria meningitidis sero-group b
 - e. Streptococcus pneumoniae (encapsulated variety)
5. Which of the following bacterial agents has the lowest infective dose for producing gastrointestinal disease in the human host?
- a. Enteropathogenic Escherichia coli
 - b. Enterotoxigenic Escherichia coli
 - c. Salmonella (non-typhoid serotypes)
 - d. Shigella dysenteriae ✓
 - e. Vibrio cholera
6. A patient presented with fever after 2 weeks constipation. On examination abdomen was tender, with red color macules over it. Spleen was enlarged. Which of the following investigation would most likely to reveal the organisms in first two weeks of illness
- a. stool culture
 - b. Blood culture ✓
 - c. Urine culture
 - d. Bone marrow culture
 - e. ELISA
7. A patient presented in emergency with third degree burns. Treatment was started. After 6 days there was green colored pus which was seen in his wound dressing. Name the organism causing this infection:
- a. Staphylococcus
 - b. Enterobacter
 - c. Pseudomonas ✓
 - d. Klebsiella
 - e. Enterobacter
8. Which of the following organisms can contaminate respiratory equipments?
- a. Klebsiella ✓
 - b. Proteus
 - c. E.coli
 - d. Bacteroides
 - e. Serratia
9. Which of the following is the reaction of proteus on TSI?
- a. alkaline slant/ acid butt/ Gas(-)/ H₂S (+) ✓
 - b. alkaline slant/ negative butt/ GAS (+)/ H₂S (-)
 - c. acid slant/ alkaline butt/ GAS(+)/ H₂S(-)
 - d. acid slant/ alkaline butt/ GAS(-)/ H₂S(-)
 - e. Alkaline slant/ alkaline butt/ GAS(-)/ H₂S(-)

10. Organisms producing swarming motility on blood agar is:
- Klebsiella
 - Proteus ✓
 - E.coli
 - Pseudomonas
 - Bacterioides
11. Generalized edema results from all the following EXCEPT:
- Systemic hypertension. ✓
 - Congestive heart failure.
 - Liver cirrhosis.
 - Nephrotic syndrome.
 - Hyperaldosteronism.
12. Disorders that predispose to thrombosis include all of the following EXCEPT:
- Pancreatic carcinoma. ✓
 - Pregnancy.
 - Vitamin K deficiency.
 - Sickle cell anemia.
 - Oral contraceptive pills.
13. Which of the followings is the mechanism of edema in patients with congestive heart failure?
- Decreased plasma oncotic pressure.
 - Endothelial damage.
 - Increase hydrostatic pressure. ✓
 - Increase vascular permeability. ✓
 - Lymphatic obstruction.
14. What is the most common site of origin of thrombotic pulmonary emboli?
- Lumen of left ventricle.
 - Deep leg veins. ✓
 - Lumen of right ventricle.
 - Mesenteric veins.
 - Superficial leg veins.
15. Dependent edema found in congestive heart failure is most likely due to:
- Lymphatic obstruction.
 - Increase hydrostatic pressure. ✓
 - Arteriolar dilatation.
 - Reduced plasma oncotic pressure.
 - Endothelial injury.
16. Infarcts tend to be hemorrhagic when they occur in:
- Kidney.
 - Lungs. ✓
 - Spleen.
 - Heart.
 - Brain. ✓

17. The most common site of venous thrombosis is:

- a. Brain.
- b. Kidney.
- c. Legs. ✓
- d. Liver.
- e. Lung.

18. "Nutmeg Liver" is seen in:

- a. Liver cirrhosis.
- b. Liver necrosis.
- c. Chronic passive congestion. ✓
- d. Thrombosis of the portal veins.
- e. Hemorrhage due to liver trauma.

19. After returning from camping outing, several children report watery, greasy and foul smelling stools. Deer, cattle and horses were to be in vicinity. The cycle of the parasite responsible for this outbreak consists of two stages: the cyst and trophozoite. Which of the following is most likely identification of this organism?

- a. *Clonorchis sinensis*
- b. *Entamoeba histolytica*
- c. *Giardia lamblia* ✓
- d. *Pneumocystis carini*
- e. *Trichomonas vaginalis*

20. A woman who recently returned from India complains of having paroxysmal attack of chills, fever and sweating. These attacks last a day or two at a time and recur every 48 hours. Examination of peripheral blood smear shows high level of red blood cell parasitemia with occasional banana shaped gametocytes. Which of the following is most likely infecting organisms?

- a. *Plasmodium falciparum* ✓
- b. *Leishmania donovani*
- c. *Schistosoma masoni*
- d. *Trypanosome gambiense*
- e. *Wuchereria bancrofti*

21. Which of the following parasite can be transmitted vertically?

- a. *Echinococcus granulosus*
- b. *Toxoplasma gondii* ✓
- c. *Giardia lamblia*
- d. *Entamoeba histolytica*
- e. *Trypanosome*

22. *Leishmania donovani* causes a disease characterized by fever, weight loss, fatigue, anemia and hepatosplenomegaly known as?

- a. Sleeping sickness
- b. Dysentery
- c. Kala-azar ✓
- d. Oriental sores
- e. Malaria

23. An AIDS patient develop profuse watery diarrhea. Examination of stool specimen reveals no pus cells and show modified Zn positive small 4-6 μm round to oval cysts. The most likely causative agent is

- a. Giardia lamblia
- b. Balantidium coli
- c. Cryptosporidium parvum
- d. Enteromonas hominis
- e. Blastocystis hominis

24. A young married woman complains of severe vaginal itching with watery foul smelling vaginal discharge. A wet mount of vaginal discharge shows pear shaped trophozoites with jerky motion. What is the causative agent?

- a. Entamoeba histolytic
- b. Giardia lamblia
- c. Trichomonas vaginalis
- d. Entamoeba coli
- e. Balantidium coli

25. 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

26. A 3rd year medical student is asked to write a microscopic description of a coagulative necrosis that was found in the heart of a patient who died of a heart attack. Which of the following best describes coagulative necrosis?

- a. Central amorphous a cellular eosinophilic material.
- b. Eosinophilic cytoplasm with cell outlines preserved.
- c. Granular, friable mass of material devoid of cell outlines.
- d. Localized, solid, basophilic lesion with calcification
- e. Necrosis with liquid mass.

27. Which of the following substance has the potential of chemotactic ability?

- a. C5a
- b. Flucosyltransferase
- c. Integrins
- d. Selectin
- e. TNF

28. A 45-year-old man developed right lower quadrant abdominal pain over the last one day. Appendectomy was performed and the appendix was swollen, erythematous, and partly covered by a yellowish exudate. Microscopic section showed infiltration with numerous neutrophils. The pain experienced by this patient was predominantly the result of the formation of which of the following chemical mediators?

- a. Complement C3b and IgG
- b. Histamine and serotonin
- c. Prostaglandin and bradykinin
- d. Interleukin-1 and tumor necrosis factor

e. Leukotriene and HPETE

29. A 16 years old motor cyclist boy sustained blunt trauma to his abdomen. At laparotomy, a small portion of injured lobe of liver was removed. Two months later, a CT scan of the abdomen showed that the liver had nearly regained normal size. Which of the following processes best explains this CT scan finding?

- a. Apoptosis
- b. Dysplasia
- c. Hyperplasia ✓
- d. Hypertrophy
- e. Metaplasia

30. A 20 year old man presents with yellowing of the sclera, skin, and oral mucosa. Which of the following accumulations underlies these findings?

- a. Bilirubin ✓
- b. Hemosiderin
- c. Lead
- d. Melanin
- e. Silver

31. Which of the following is the most efficient killing mechanism of neutrophils?

- a. Collagenase
- b. Reactive oxygen species
- c. Protease
- d. Myeloperoxidase ✓
- e. Defensins

32. A 55 years old man suffered from myocardial infarction and worsening congestive heart failure. There is dyspnoea and orthopnea for the last 2 months. Pleural fluid is aspirated. Which of the following characteristics of this fluid would most likely indicate that it is a transudate?

- a. Cloudy appearance
- b. Low protein content ✓
- c. Increased lymphocytes
- d. Presence of fibrin
- e. Large size of effusion

33. Acute inflammation is characterized by

- a. Neutrophils ✓
- b. Macrophages
- c. Lymphocytes
- d. Plasma cells
- e. Epithelioid cells

34. A young man got a lacerated wound on his left arm, which was stitched. A week later the stitches were removed. Healing at the wound site continued but the site became disfigured by prominent raised nodular scar in the next 2 months. Which of the following best describes the process?

- a. Organization
- b. Dehiscence
- c. Resolution
- d. Keloid formation ✓
- e. Secondary Union

35. A 40-year-old man incurs a burn injury to his hands and arms while working on a propane furnace. Over the next 3 weeks, the burnt skin heals without the need for skin grafting. Which of the following is the most critical factor in determining whether the skin in the region of the burn will regenerate?
- a. Good cardiac output with tissue perfusion
 - b. Persistence of skin appendages
 - c. Maintenance of underlying connective tissue
 - d. Diminished edema and erythema
 - e. Granulation tissue formation
36. A 38 year old lady presented with difficulty in swallowing and a huge neck mass. The mass was excised and was found to be a papillary carcinoma thyroid. Histologic details included papillary structures with hyperchromatic nuclei, prominent nucleoli and scattered bluish structures labeled as psammoma bodies. Which is of the following is the basic defect producing these psammoma bodies.
- a. Bacterial infection
 - b. Dystrophic calcification
 - c. Inflammatory necrosis
 - d. Metastatic calcification
 - e. Viral infection.
37. A 56 years old man with history of chronic alcoholism has notice weight loss of about 6 kgs in last 5 months. Physical exam reveals no masses or lymphadenopathy. Alpha fetoprotein levels are raised in blood. Diagnosis?
- a. Prostatic CA
 - b. Lung CA
 - c. Multiple Myeloma
 - d. HCC
 - e. Pancreatic CA
38. A 36 years old female has a small pigmented mass on her upper chest. She gives history of having this for a very long time. It is 0.5 cm large dark, non tender, raised with smooth surface. The tumour is arising from a blood vessel. Diagnosis?
- a. Adenoma
 - b. Fibroma
 - c. Hemangioma
 - d. Hamartoma
 - e. Nevus
39. Regarding staging of tumour, What is important?
- ~~a. Nuclear cyto-plasmic ratio~~
 - ~~b. Number of mitosis~~
 - c. Acidophilia
 - d. Tumour size
 - e. Nuclear-pleomorphism
40. Proto-oncogenes (growth promoting genes) are all EXCEPT
- a. P53
 - b. EPGF
 - c. EPGF receptor
 - d. RAS protein
 - e. C-Myc

41. Aberrant differentiation may produce a mass of disorganized but mature specialized cells in tissue indigenous to the particular site referred to as:

- a. Lipoma
- b. Fibroma
- c. Teratoma
- d. Haemangioma
- e. Hamartoma ✓

42. In a 50 year old female with carcinoma of left breast and metastatic carcinoma in left axillary lymph nodes, which of the following factors is most likely responsible for lymph node metastasis:

- a. Increased laminin receptors on tumor cells
- b. Presence of keratin in tumor cells ✓
- c. Decreased apoptosis of tumor cell
- d. In situ component
- e. Lymphadenitis

43. Dimorphism is a characteristic of

- a. Bacteria
- b. Fungi ✓
- c. Prions
- d. Rickettsia species
- e. Viruses

44. An organism with two identical alleles is

- a. Dominant
- b. Recessive
- c. Hybrid
- d. Homozygous ✓
- e. Heterozygous

45. 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-1 hypersensitivity ✓
- b. Type-II hypersensitivity
- c. Type-III hypersensitivity
- d. Type-IV hypersensitivity
- e. Hemolysis

46. Loss of which of the following classes molecules on the surface of a target tumour cell would result in loss of susceptibility to killing by CD8+ cells?

- a. Beta-2 microglobulin
- b. CD3
- c. CD8
- d. MHC class-I ✓
- e. MHC class-II

47. A 76 years old elderly female come to you after she started feeling pain in her prosthetic hip joint and developing fever. Suspecting Staphylococcus epidermidis Infection, what is the most likely source of this organism?

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

48. In the gram stain procedure, bacteria re-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 solution
- e. To facilitate entry of purple dye into gram negative bacteria

49. A young over enthusiastic science student took a culture of his healthy skin from the dorsum of his hand. He was informed after 24 hours that it has growth of Staphylococcus epidermidis, and diphtheroids. He was worried and went to his physician and was told not to worry, because the growth was:

- a. Normal human skin flora ✓
- b. Transient skin flora
- c. Pathogenic skin flora
- d. Normal flora of the colon
- e. Saprophyte

50. Bacteria can be cultivated on artificial media which provide nutritive ingredients to them. In addition oxygen tension and pH help for better growth of bacterial colonies. Which of the following media is having anaerobic characteristics?

- a. Blood agar
- b. MacConkey's agar
- c. Chocolate agar
- d. Nutrient agar
- e. Cooked meat medium ✓

51. For Sterilization of heat sensitive surgical instruments and sutures, which of the following sterilization method is most appropriate?

- a. Biphenol
- b. Formalin
- c. Ethylene oxide ✓
- d. Acraflavin
- e. Gentian violet

52. Infection that spread rapidly over large areas of the globe

- a. Endemic ✓
- b. Epidemics
- c. Pandemic ✓
- d. Opportunistic infection
- e. None of above

53. The structure that is found in gram negative bacteria but not in gram positive bacteria is a

- a. Capsule
- b. Cell wall
- c. Cytoplasmic membrane
- d. Endospore
- e. Outer membrane ✓

54. A diphtheroid gram-positive rod may develop into a pathogenic *Corynebacterium diphtheriae* by means of a bacteriophage infection. Transfer of a donor chromosome fragment to a temperate bacterial virus is defined as which one of the following?

- a. Competence
- b. Conjugation
- c. Recombination
- d. Transduction ✓
- e. Transformation

55. An HIV patient asks you if you can tell him chances of his progressing to active disease. Which of the following test will be useful?

- a. CD4 lymphocyte count ✓
- b. HIV antibody test
- c. HIV RT-PCR
- d. Neoptrin
- e. HIV P24 antigen. ✓

56. 5 year old presents at physicians office with symptoms of conjunctivitis, low grade fever and Koplik's spots. The causative agent belongs to which viral group.

- a. Adenovirus
- b. Paramyxovirus ✓
- c. Orthomyxo virus
- d. Herpes virus
- e. Picornavirus.

57. A young boy was received in emergency department with history of fever, malaise, headache and cough. Along with that he had joint and muscle pains. On examination a macula-papular rash was observed on his body. His labs showed leucopenia, increased hematocrit and decreased platelet count. The most likely virus would be:

- a. Yellow fever virus ✓
- b. Dengue virus ✓
- c. West Nile virus
- d. St. Louis encephalitis virus
- e. California encephalitis virus

58. What is a mass of fungal filaments called?

- a. Pseudohyphae
- b. Hyphae
- c. Mycelium ✓
- d. Septum
- e. Yeast

59. A non-compliant, human Immunodeficiency virus (HIV)-positive patient has been complaining of a stiff neck and a severe headache. The headache was initially lessened by analgesics, but the analgesics are no longer effective. His current CD4+ count is 180/mm³. He is not on any prophylactic drugs. What is the most likely causative agent?

- a. Aspergillus
- b. Cryptococcus ✓
- c. Candida
- d. Malassezia
- e. Sporothrix

60. A hospital worker is found to have hepatitis B surface antigen. Subsequent tests reveal the presence of "e antigen" as well. Which of the following best describes the worker?

- a. Is infective and has active hepatitis ✓
- b. Is infective but does not have active hepatitis
- c. Is not infective
- d. Is evincing a biologic false- positive test for hepatitis
- e. Has both hepatitis B and hepatitis C

مکراتی رقم