

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. *Wucheria 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 10^6 per 10 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 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

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 regain 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. EPFG receptor
- d. RAS protein
- e. C-Myc

41. Aberrant differentiation may produce a mass of disorganized but mature specialized cells in tissue in situ. The particular site referred to as:
- Lipoma
 - Fibroma
 - Teratoma
 - Haemangioma
 - 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:
- Increased laminin receptors on tumor cells
 - Presence of keratin in tumor cells
 - Decreased apoptosis of tumor cell
 - In situ component
 - Lymphadenitis
43. Dimorphism is a characteristic of
- Bacteria
 - Fungi
 - Prions
 - Rickettsia species
 - Viruses
44. An organism with two identical alleles is
- Dominant
 - Recessive
 - Hybrid
 - Homozygous
 - 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
- Type-I hypersensitivity
 - Type-II hypersensitivity
 - Type-III hypersensitivity
 - Type-IV hypersensitivity
 - 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?
- Beta-2 microglobulin
 - CD3
 - CD8
 - MHC class-I
 - 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 all these 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 diphtheria* by means of a bacteriophage infection. Transfer of a donor chromosome fragment t by 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



Proff + Sendup.

THE SUPERIOR COLLEGE, LAHORE

3rd PROFESSIONAL MBBS
Annual EXAMINATION 2018
PATHOLOGY

(SEQ's)

Roll No. FS-089

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 45-year-old man is referred because of a recent diagnosis of hereditary hemochromatosis.

- a) Which pigment is accumulated in such a condition? 1
- b) Enlist any FOUR other intracellular accumulations with their associated diseases. 4

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? 1
- b) Enlist functions of all major complement proteins in inflammation. 4

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. 3
- b) How does a p53 gene work? Briefly describe in your own words. 2

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Q-No: 5. A 24-year-old woman who had previously been uneventfully transfused during surgery and shortly thereafter develops itching, general edema and dyspnea with wheezing respiration. She has a past history of recurrent tract infections and frequent episodes of diarrhea

- a) Laboratory studies are most likely to reveal decreased concentrations of immunoglobulins?
- b) Enlist any FOUR classical examples of type II hypersensitivity reaction.

Q-No: 6. A 34-year-old male, arrives at a local health clinic, complaining that he has fever, and 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 stain 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

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. 2
- c) Name four oncogenic viruses. 2

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



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

66
75
135
Total Marks: 75

Time Allowed: 2 hour

Name: _____

Roll No: _____

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
b. Name the mechanisms of transfer of bacterial genetic material? 2
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.
a. What is your diagnosis? 1
b. Give its pathogenesis. 4
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-water.
a. What is your diagnosis? 1
b. What is its mode of transmission? 1
c. What is the pathogenesis of it? 3
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.
a. Name the disease & the causative agent. (1)
b. What are the differences in the CSF of viral, bacterial and tuberculous meningitis? (2)
c. Name one organism each causing meningitis in following age groups:
o Neonates
o children and Adults (1)
d. Enumerate two differences between gonococci and meningococci. (1)

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 high.

- a. Name the viruses causing hepatitis (1)
- b. How can you confirm the type viral infection by serologies (3)
- c. Name the complications (1)

6. a. Define septic shock. (2)

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

7. a. Name the tapeworms. 2

b. Describe the life cycle, laboratory diagnosis of *Echinococcus granulosus*. 3

8. A 65 year 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. (2)

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

- a. What do you understand by paraneoplastic syndrome? Give its examples. (3)
- b. Name the various laboratory diagnostic procedures for neoplasia. (2)

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.

- a. What is the expected underlying chromosomal abnormality in this child? (2)
- b. Describe the mechanism of development of this genetic abnormality? (3)

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)

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)

A five year old girl is brought to the emergency with severe respiratory difficulty and wheezing. She has had an episode of anaphylaxis four hours after intake of fish. There is history of similar episodes in the past.

- a. Name the type of hypersensitivity reaction involved. (1)
- b. Name two preformed and two newly synthesized mediators of mast cells and their actions. (4)

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 (1)
- b. Mode of transmission (1)
- c. Pathogenesis (3)

Handwritten scribbles and calculations, including numbers like 36, 38, 71, 71, 142, and 10, 12, 13, 25, 32.



Department of Pathology
Azra Naheed Medical College

Send up 2018
MBBS 3rd Year (MCQ)

46

Time Allowed: 60 min

Total Marks: 60

Name: Muqal Ali

Roll No: F15-147

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

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