

The important feature of *Proteus* is the production of enzyme:

- a. Hydrolase
 - b. Catalase
 - c. Urease
 - d. Protease
 - e. Lactase
28. A 30 year old man presented with fever and cough productive of "currant-jelly sputum". On examination patient's physical findings are consistent with pneumonia. Culture of the sputum reveals Gram negative mucoid lactose fermenters. What is the most likely pathogen?
- a. *Haemophilus influenzae*
 - b. *Klebsiella pneumoniae*
 - c. *Escherichia coli*
 - d. *Pseudomonas aeruginosa*
 - e. *Proteus mirabilis*
29. Important characteristics of *Pseudomonas aeruginosa* are:
- a. Fruity smell and pyocyanin production
 - b. Pyocyanin production and often antibiotic resistant
 - c. Nosocomial infections and drug resistance
 - d. Fruity smell, pyocyanin production, nosocomial infections and often drug resistant
 - e. Community acquired infections and drug resistance
30. A 60 year old smoker presented with fever, cough, and scanty sputum. A presumptive diagnosis of atypical pneumonia is made. Which of the following organisms is most likely involved?
- a. *Klebsiella pneumoniae*
 - b. *Legionella pneumophila*
 - c. *Staphylococcus aureus*
 - d. *Streptococcus pneumoniae*
 - e. *Haemophilus influenzae*
31. Which of the following statements is not correct regarding members of the family enterobacteriaceae?
- a. All are Gram negative rods
 - b. All are oxidase negative
 - c. All reduce nitrate to nitrite
 - d. All ferment lactose
 - e. All ferment glucose
32. A 20 year old cricket player develops itching between the toes followed by small vesicles that ruptures and discharges a thin fluid. The skin becomes ulcerated, peels and cracks develops. His "Id" reaction is positive. Which of the following is he suffering from?
- a. *Tinea pedis*
 - b. *Tinea capitis*
 - c. *Tinea versicolor*
 - d. *Tinea cruris*
 - e. *Tinea barbae*

- a. Uncontrolled mitosis
 b. Variability in shape and size
 c. Multiple nuclei
 d. The cells are different from where they arose from
 e. None
6. What is the term that means "new growth"?
- a. Neoplasia
 b. Anaplasia
 c. Metaplasia
 d. Hyperplasia
7. A wound with minimal or no residual defect is known as:
- a. Intentional healing
 b. Healing by first intention
 c. Healing by second intention
 d. Superficial healing
 e. Healing by malunion
8. Movement between two broken ends of leg bone will result in:
- a. Pain
 b. Excessive callus
 c. Slow tissue union
 d. a and c
 e. a, b and c
9. The growth of *M. tuberculosis* in serpentine strands is due to:
- a. Low pH in the medium
 b. Serpentine growth factor in the medium
 c. Egg yolk lipids in the medium
 d. All of the above (a-c)
 e. None of the above (a-c)
10. PPD is an antigen derived from:
- a. *Mycobacterium tuberculosis*
 b. *Mycoplasma pneumoniae*
 c. *Pseudomonas aeruginosa*
 d. *Yersinia pestis*
 e. None of the above (a-d)
11. Gram positive, catalase positive, coagulase negative and Novobiocin sensitive:
- a. *Staph. Epidermidis*
 b. *Staph. Saprophyticus*
 c. *Staph. Aureus*
 d. *Enterococcus faecalis*
 e. None of the above
12. Which enzymes produced by *staph. Aureus* result in invasion of normal healthy skin:
- a. Hyaluronidase
 b. Fibrinolysin
 c. Both a and b
 d. All of the above (a-c)
 e. Both b and c are true

- a. Subcutaneous
- b. Superficial
- c. Cutaneous
- d. Systemic
- e. Opportunistic

34. *Candida* grows in the form of:

- a. Algae
- b. Mold
- c. Yeast
- d. Yeast as well as mold
- e. Yeast and pseudohyphae

35. Which of the following statement about *Cryptococcus neoformans* is incorrect?

- a. Budding yeasts are found in the lesions
- b. Pathogenesis is related primarily to the production of exotoxin A
- c. Laboratory diagnosis is made by India ink preparation
- d. Its natural habitat is the soil, especially associated with pigeon feces
- e. The initial site of infection is usually the lung

36. A 31-year-old woman has a laparotomy performed for removal of an ovarian cyst. She recovers uneventfully, with no complications. At the time of surgery, a 12 cm long midline abdominal incision was made. You advise this patient of the outcome of this healing process, and indicate that tensile strength in the surgical scar will increase so her normal activities can be resumed. Most of the tensile strength will likely be achieved in which of the following time periods?

- a. One week
- b. One month
- c. Three months
- d. Six months
- e. One year

37. A clinical study is performed on patients with pharyngeal infections. The most typical clinical course averages 3 days from the time of onset until the patient sees the physician. Most of these patients experience fever and chills. On physical examination, the most common findings include swelling, erythema, and pharyngeal purulent exudate. Which of the following types of inflammation did these patients most likely have?

- a. Granulomatous inflammation
- b. Acute inflammation
- c. Abscess formation
- d. Resolution of inflammation
- e. Chronic inflammation

38. A child had a high grade fever due to streptococcal throat infection. His peripheral smear showed WBC count of 15,000/uL. Which of the following substances is the most likely mediator for the fever observed in this patient?

- a. Bradykinin
- b. Leukotriene B₄
- c. Histamine
- d. Nitric oxide
- e. Interleukin 1

- ...the following is the most efficient killing mechanism of neutrophils?
- a. Collagenase
 - b. Reactive oxygen species
 - c. Protease
 - d. Myeloperoxidase
 - e. Defensins
40. A 56-year-old man has had increasing dyspnea for 6 years. He has no cough or fever. He was inhaling silica dust for many years in his job. A chest x-ray now shows increased interstitial markings and parenchymal 1 to 3 cm nodules. His pulmonary problems are most likely to be caused by which of the following inflammatory processes?
- a. Neutrophilic infiltration with release of leukotrienes
 - b. Histamine release by mast cells
 - c. Foreign body giant cell formation
 - d. Plasma cell production of immunoglobulin
 - e. Release of growth factors by macrophages
41. Complement fixation refers to:
- a. The ingestion of C3b coated bacteria by macrophages
 - b. The destruction of complement by serum
 - c. The binding of complement components by antigen antibody complexes
 - d. The interaction of C3b with mast cells
 - e. None of the above
42. Natural killer cells are:
- a. B cells that can kill without complement
 - b. Cytotoxic T cells
 - c. Increased by immunization
 - d. **Able to kill virus infected cells**
 - e. Positive immune response
43. The class of immunoglobulin present in highest concentration in the blood of human newborn is:
- a. IgA
 - b. IgM
 - c. IgD
 - d. IgE
 - e. **IgG**
44. Antigen presenting cells that activate helper T cells must express following on their surface?
- a. IgE
 - b. Gamma interferon
 - c. Class I MHC antigen
 - d. **Class II MHC antigen**
 - e. NK cells
45. The main advantage of passive immunization over active immunization is that:
- a. It can be administered orally
 - b. **It provides antibody more rapidly**
 - c. Antibody persists for a longer period
 - d. It contains primarily IgM
 - e. None of the above

- 16) A 70-year-old man with hypercalcemia died suddenly. At autopsy, macroscopic examination showed noncrystalline amorphous deposits of calcium salts in gastric mucosa, renal interstitium, and alveolar walls of lungs. Which of the following underlying conditions would most likely explain these findings?
- Chronic active hepatitis
 - Diffuse parathyroid hyperplasia
 - Disseminated tuberculosis
 - Generalized atherosclerosis
 - Normal aging process
- 16) A 45-year-old man developed right lower quadrant abdominal pain over the last one day. Physical examination revealed rebound tenderness over the right lower quadrant. Appendectomy was performed and the appendix was swollen, erythematous, and partly covered by a yellowish exudate. It was removed, and 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?
- Complement C3b and IgG
 - Histamine and serotonin
 - Prostaglandin and bradykinin
 - Interleukin-1 and tumor necrosis factor
 - Leukotriene and HPETE
- 17) A 50-year-old man had chronic cough with fever and weight loss for the past 2 months. A chest radiograph reveals multiple nodules from 1 to 4 cm in size, some of which demonstrate cavitation in the upper lobes. A sputum sample reveals the presence of acid fast bacilli. Which of the following cells is the most important in the development of his lung lesions?
- Fibroblast
 - Platelet
 - Neutrophil
 - Mast cell
 - None of the above
- 18) A 20-year-old man has experienced painful urination for 4 days. Urethritis is suspected. Numerous neutrophils are present in a smear of the exudate from the urethra. The diapedesis of neutrophils is the consequence of which of the following chemical mediators?
- Histamine
 - Prostaglandin
 - Hageman factor
 - Bradykinin
 - Complement C5a
- 19) An episode of marked chest pain lasting 4 hours brings a 51-year-old man to the emergency room. He is found to have an elevated serum creatine kinase. An angiogram reveals a complete blockage of the left circumflex artery. Which of the following substances is most likely to be elaborated around the region of tissue damage in 3 days as an initial response to promote healing?
- Histamine
 - Immunoglobulin G
 - Complement C3b
 - Leukotriene B4
 - Vascular endothelial growth factor
- 20) A 29-year-old man had a sharp cut on his hand. Over the next 3 days the area around the wound becomes red, swollen and tender. Neutrophils migrate into the injured tissue. Expression of which of the following substances on endothelial cells is most instrumental in promoting this inflammatory reaction?
- Interferon gamma
 - Hageman factor
 - Lysozyme
 - E-selectin
 - Prostacyclin
- 21) A 15-year-old girl has had episodes of sneezing with watery eyes and runny nose for the past 2 weeks. On physical examination she has red, swollen nasal mucosa. She has had similar episodes each spring and summer when the amount of pollen in the air is high. Her symptoms are most likely to be mediated by the release of which of the following chemical mediators?
- Complement C3b
 - Platelet activating factor (PAF)
 - Tumor necrosis factor (TNF)
 - Histamine
 - Fibroblast growth factor

20. Which of the following is not true of measles virus infection:
- It produces maculopapular rash
 - It systemically spreads
 - It produces Koplics spots
 - It usually produces permanent immunity
 - It only causes acute infections
21. Hepatitis C virus belongs to which virus family:
- Flaviviridae
 - Bunyaviridae
 - Picornaviridae
 - Paramyxoviridae
 - Caliciviridae
22. Which of the following statements is correct regarding exotoxins?
- Produced by Gram positive bacteria only
 - Protein in nature
 - Produced by Gram negative bacteria only
 - C carbohydrate in nature
 - Glycoprotein in nature
23. The identification of bacteria by serological tests is based on the presence of specific antigens. Which one of the following bacterial components is least likely to contain useful antigens?
- Capsule
 - Flagella
 - Cell wall
 - Ribosomes
 - Pili
24. The commonest criteria used for classification of medically important bacteria is/are:
- Cell wall composition and morphology
 - Gram staining reaction
 - Shape
 - Cell wall composition
 - Morphology
25. Which of the following sites has the largest number of normal flora?
- Skin
 - Female genital tract
 - Colon
 - Mouth
 - Respiratory tract
26. 30 year old man presented with swelling of cervical lymph nodes, high grade fever and myalgias. On physical examination, nodes were enlarged and tender. On blood culture, it revealed safety pin Gram negative rods. The most likely organism is:
- Legionella pneumophilia
 - Yersinia pestis
 - Hemophilus influenza
 - Escherichia coli
 - Salmonella typhi

- 22) In an experiment, surgical wound sites are observed following suturing. An ingrowth of new capillaries is observed to occur within the first week. A substance elaborated by macrophages is found at the wound site to stimulate this capillary proliferation. Which of the following substances is most likely to have this function?
- Platelet-derived growth factor
 - Phospholipase C-gamma
 - Fibronectin
 - Fibroblast growth factor
 - Epidermal growth factor
- 23) A 56-year-old man has had increasing dyspnea for 6 years. He has no cough or fever. He was inhaling siliceous dust for many years in his job. A chest x-ray now shows increased interstitial markings and parenchymal nodules to 3 cm nodules. His pulmonary problems are most likely to be caused by which of the following inflammatory processes?
- Neutrophilic infiltration with release of leukotrienes
 - Histamine release by mast cells
 - Foreign body giant cell formation
 - Plasma cell production of immunoglobulin
 - Release of growth factors by macrophages
- 24) 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?
- Organization
 - Dehiscence
 - Resolution
 - Keloid formation
 - Secondary Union
- 25) 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?
- Good cardiac output with tissue perfusion
 - Persistence of skin appendages
 - Maintenance of underlying connective tissue
 - Diminished edema and erythema
 - Granulation tissue formation
- 26) A 25 years old female is suffering from chronic bronchial asthma. She is on steroids for her symptoms. Which of the following is MOST responsible for the anti-inflammatory activity of corticosteroids?
- Inhibition of Phospholipase A2
 - Destruction of eosinophils
 - Inhibition of cyclooxygenase
 - Increased leukocyte adhesion endothelial cells
 - Inhibition of lipooxygenase
- 27) Which of the following is the most efficient killing mechanism of neutrophils?
- Collagenase
 - Reactive oxygen species
 - Protease
 - Myeloperoxidase
 - Defensins
- 28) A 55 years old man suffered from myocardial infarction and worsening congestive heart failure. There is dyspnea 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?
- Cloudy appearance
 - Low protein content
 - Increased lymphocytes
 - Presence of fibrin
 - Large size of effusion
- 29) The feature that differentiates primary from secondary healing is:
- A inflammatory reaction
 - Granulation tissue
 - Wound contracture
 - Angiogenesis
 - Fibroblast

A 64 year old sheep herder is rushed to the emergency room in anaphylactic shock. His history revealed trauma to the abdomen. Ultrasound showed a large cystic lesion in liver. Needle aspiration of liver cyst reveals hydatid sand. Which of the following is the most likely agent involved?

- a. *Ascaris lumbricoides*
 - b. *Clonorchis sinensis*
 - c. *Echinococcus granulosus*
 - d. *Schistosoma mansoni*
 - e. *Fasciolopsis hepatica*
47. A young woman goes to her doctor with complaint of yellowish vaginal discharge associated with tenderness. Microscopy of vaginal discharge revealed a pear shaped protozoan with jerky motility. Which of the following is the most likely agent?
- a. *Trichomonas vaginalis*
 - b. *Candida albicans*
 - c. *Toxoplasma gondii*
 - d. *Trichinella spiralis*
 - e. *Balantidium coli*
48. Which of the following is not a cestode?
- a. *Taenia solium*
 - b. *Diphyllobothrium latum*
 - c. *Echinococcus granulosus*
 - d. *Hymenolepis nana*
 - e. *Entrobilus vermicularis*
49. A 30 year old farmer developed pruritic papule on his foot, which was ignored by him. After a few days he experienced the signs and symptoms of pneumonia with eosinophilia on blood complete picture. What is the most likely parasite responsible for his condition?
- a. *Schistosoma*
 - b. *Ankylostoma duodenale*
 - c. *Entrobilus vermicularis*
 - d. *Trichuris trichiura*
 - e. *Diphyllobothrium latum*
50. Which of the following statements regarding plasmodium is not true?
- a. Mosquito is the definitive host
 - b. Schizogony takes place in the liver of humans
 - c. *Plasmodium malariae* leads to malignant tertian malaria
 - d. Benign tertian malaria is caused by plasmodium ovale and vivax
 - e. *P. falciparum* causes cerebral malaria and black water fever
51. Which of the following listed statements about the death receptor pathway of apoptosis is incorrect?
- a. It is also known as extrinsic pathway
 - b. Fas (CD95) is a death receptor
 - c. It stimulates the caspase 8
 - d. It is also known as intrinsic pathway
 - e. TNF is a death receptor

52. A 20-year old man was evaluated for persistent cough, night sweats, low-grade fever and general malaise. He was diagnosed with pulmonary tuberculosis. His lymph node biopsy specimen shows cheesy, non-cellular, central material surrounded by large multinucleated giant cell and epithelioid cells and lymphocytes, the most likely pathology will be:
- Fibrinoid necrosis
 - Gangrenous necrosis
 - Coagulative necrosis
 - Caseous necrosis
 - Liquefactive necrosis
53. Regarding metaplasia which is true:
- It is an adaptive change which can lead to carcinoma
 - It is irreversible
 - It occurs only in epithelium
 - There is cloudy swelling of cells
 - There is an increase in nucleo-cytoplasmic ratio of cells
54. Which one of the following association is incorrect?
- Hypertrophy— Increase in cell size
 - Metaplasia— Replacement of one type of cell by another
 - Hyperplasia— Increase in cell size
 - Atrophy— Decrease in size of organ
 - Hyperplasia— Increase in cell number
55. Reduced plasma oncotic pressure is the most important mechanism of edema in:
- Nephrotic syndrome
 - Congestive heart failure
 - Pedal edema due to deep vein thrombosis
 - Edema due to lymphatic obstruction
 - Brain hemorrhage
56. Fate of thrombus includes
- Shock
 - Propagation
 - Dissolution
 - b & c
 - All of above
57. Venous thrombus is called:
- AV fistula
 - Phlebotrombosis
 - Air embolism
 - Fat embolism
 - Amniotic fluid embolism
58. Ascite is known as:
- Accumulation in plural cavity
 - Accumulation in brain
 - Accumulation in peritoneal cavity
 - Thrombosis
 - None of above

- c. Size of cell typically 0.2-2.0 μm in diameter
 d. Ribosomes larger size (80s); smaller size (70s) in organelles
- 37) Alcohol is denaturant that rapidly kills bacteria when applied in aqueous solution in range of;
 a. 10-30%
 b. 30-50%
 c. 50-60
 d. 70-75%
 e. 95-100%
- 38) In the fall of 2001, Gram positive anthrax bacillus survived even disinfection of the wards; this was or possible due to the formation of:
 a. Keratin coat of endospore
 b. Disulfide bonds
 c. Lipid A
 d. Capsule
 e. Peptidoglycan
- 39) 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 bacteria and spores:
 a. Boiling them at 100 degrees C
 b. Tyndalization
 c. Incubation
 d. Autoclaving
 e. Pasteurization
- 40) Pathogenesis is a process of disease production which includes the mechanisms depending upon certain sequence of events i.e. source of infection, transmission of microorganisms, survival and multiplication ability to avoid host defense mechanisms and damage to the host. Which of the following options is most appropriate to enhance the virulence of microorganism?
 a. Absence of capsule & surface proteins
 b. Damage Fimbriae or pili
 c. Enhanced phagocytosis
 d. Plasmid and chromosomal resistance
 e. Toxin production
 f. Release of lysogenic enzymes
 g. Increase in probiotics
- 41) Sterilization by moist heat destroys the microbes by:
 a. Dehydration of cells
 b. Coagulation of cellular proteins
 c. Denaturation of cellular DNA
 d. Inactivation of cell membranes
 e. Modification of golgi complex
- 42) 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
- 43) 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

- 30) A young man had a laceration in a road side accident. The wound was fleshy pink showing granulation tissue formation. How much time is required for this process:
- a. 15 days
 b. 3-5 days
 c. 24 hours
 d. 1 month
 e. 3 months
- 31) A hypertensive patient had severe chest pain due to myocardial ischemia. He recovered from the initial episode and was put on Aspirin to inhibit platelet aggregation. Which of the following pathways is inhibited by aspirin?
- a. Cyclo-oxygenase Pathway
 b. Lipo-oxygenase pathway
 c. Classic pathway
 d. Alternate pathway
 e. Lactin pathway
- 32) A ten year old child accidentally touches a pot of boiling water. Within few hours there is marked erythema of the skin of the fingers and small blisters appear on the finger pads. Which of the following terms best describes the process?
- a. Fibrinous inflammation
 b. Purulent inflammation
 c. Serous inflammation
 d. Ulceration
 e. Granulomatous inflammation
- 33) 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 mitosis & meiosis
 d. Binary fission
 e. Binary fission & mitosis
- 34) In bacterial growth curve, x-axis stands for time and y-axis for logarithmic bacterial count. In this growth curve which phase of growth shows no net increase in bacterial population due to low metabolic activities?
- a. Lag phase
 b. Log phase
 c. Stationary phase
 d. Death phase
 e. Compensatory phase
- 35) Certain bacterial infectious diseases are diagnosed by detecting antibodies in patient's serum. Which of the following bacterial cell component is highly antigenic in nature?
- a. Capsule
 b. Flagellae
 c. Endospore
 d. Plasmid
 e. Peptidoglycan
- 36) A gram positive non motile prokaryote isolated from the wound swab of a 7 year old child, which of the following characteristic differentiate it from eukaryotes?
- a. Prokaryotes do not have membrane-bound organelles.
 b. The nucleoid is a region where the circular chromosome (DNA) is located

13. Which of the following bacteria would show most heat resistance:
- Staphylococci
 - Eubacteria
 - Bacteroides
 - Coliform
 - Clostridia
14. Anaerobic gram positive rod which is part of normal flora of mucous membranes and may be associated with traumatized tissue:
- M. gordonae
 - M. tuberculosis
 - M. aviumintracellulare
 - Nocardia asteroides
 - Actinomyces israelii
15. This organism produces disseminated disease in the late stage of HIV infection:
- M. gordonae
 - M. tuberculosis
 - M. aviumintracellulare
 - Nocardia asteroides
 - Actinomyces israelii
16. Which of the following organisms does not produce a polysaccharide capsule:
- Escherichia coli
 - Klebsiella pneumoniae
 - Streptococcus pneumoniae
 - Bacillus anthracis
 - None of the above
17. Retrovirus disease is transmitted by:
- Small rodents
 - Respiratory droplets
 - Mosquito vectors
 - Contact with infected feces
 - All of the above (a-d)
18. Which of the following viruses show re-assortment:
- Influenza & rotaviruses
 - Influenza & reoviruses
 - Influenza & bunyaviruses
 - All of the above (a-c)
 - None of the above (a-c)
19. Rabies is caused by:
- Rhabdovirus
 - Direct incubation of the virus
 - Aerosol droplet
 - All of the above (a-c)
 - Only a and b are true

11. A patient was admitted in the intensive care and was diagnosed to be a case of meningitis. Her illness is related to which one of the following bacteria?

- a. *Streptococcus pneumoniae*
- b. *Neisseria meningitidis*
- c. *Haemophilus influenzae*
- d. *Staphylococcus pyogenes*

12. A 30-year-old man presented with swelling of cervical lymph nodes, high grade fever and myalgias. On physical exam, nodes were enlarged and tender. On blood culture, it revealed safety pin shaped Gram negative rods. The most likely organism is:

- a. *Legionella pneumophila*
- b. *Haemophilus influenzae*
- c. *Yersinia pestis*
- d. *Escherichia coli*
- e. *Salmonella typhi*

13. The important feature of urinary tract infections caused by *Proteus* is the production of which enzyme?

- a. Hydrolase
- b. Urease
- c. Catalase
- d. Protease
- e. Lactase

14. A 30-year-old man presented with fever and cough productive of "currant-jelly sputum". On examination patient's physical findings are consistent with pneumonia. Culture of the sputum reveals Gram negative mucoid lactose fermenters. What is the most likely pathogen?

- a. *Escherichia coli*
- b. *Pseudomonas aeruginosa*
- c. *Vibrio cholerae*
- d. *Klebsiella pneumoniae*

15. What is the mechanism of action of pertussis?

- a. Inhibits protein synthesis
- b. Lyses red blood cells
- c. Inhibits production of Ig2
- d. Activates T cells
- e. Stimulates histamine release

16. All of the following are true regarding *Leptospira* except:

- a. They are spirilla
- b. They are motile
- c. They are aerobic
- d. They are facultative anaerobes
- e. They are Gram negative

Pathology F-15-129

Arslan Asghar
BCLM Umanid

16) A 70-year-old man with hypercalcaemia 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 underlying conditions would most likely explain these findings?

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- e. Complement C5a

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- b. Platelet activating factor (PAF)
- c. Tumor necrosis factor (TNF)
- d. Histamine
- e. Fibroblast growth factor

59. Indication for prenatal analysis:

- a. Mother age < 20 years
- b. Mother age 25 years
- c. Mother > 35 years
- d. Mother with anemia
- e. Mother age 30 years

60. Following is not autosomal dominant disease:

- a. Huntington disease
- b. Neurofibromatosis
- c. Myotonic dystrophy
- d. Tuberous sclerosis
- e. Hemochromatosis

→ Autosomal Dominant.

- Marfan Syndrome
- Huntington disease
- Sickle cell anemia
- Marfan syndrome.
- Momo Syndrome
- PAPA Syndrome.

Autosomal Recessive

- Cystic fibrosis
- Sickle cell anemia
- Tay Sachs disease
- Phenylketonuria
- Cystic fibrosis
- Tay Sachs disease

25. An old man with unstable angina is treated with an intravenous glycoprotein IIb/IIIa inhibitor. The mechanism of action of this agent is the ability to:
- Dilate coronary arteries
 - Inhibit atherogenesis
 - Inhibit platelet adhesion
 - Inhibit platelet aggregation
 - Lyse thrombi
26. *Helicobacter pylori* can be pre-cancerous condition for:
- Hemangioma
 - Lymphoma
 - Gastric carcinoma
 - Leiomyosarcoma
 - Squamous Papilloma
27. After receiving incompatible blood the patient develops a transfusion reaction in the form of back pain, fever, shortness of breath and hematuria. Which one of the following statements best classify this type of immunological reaction.
- Type I hypersensitivity
 - Type II hypersensitivity
 - Type III hypersensitivity
 - Type IV hypersensitivity
 - Blood born infection
28. The advantage of passive immunization over active immunization is that:
- It can be administered orally
 - It provides antibody more rapidly
 - Antibody persists for a longer period
 - It contains primarily IgM
 - None of above
29. The role of a macrophage during an antibody response is to:
- Make antibody
 - Lyse virus infected target cells
 - Activate cytotoxic T cells
 - Process antigen and present it
 - Apoptosis
30. In a suspected case of colonic carcinoma, which of the following tumor marker is most likely to be raised ?
- Alpha feto protein
 - Antitumor antibody
 - Antitumor light chains
 - Carcinoembryonic antigen
 - Prostate specific antigen

- ...A parasite was suspected to be the causative agent...
23. A patient with a history of... A parasite was suspected to be the causative agent...
- a. *Echinococcus granulosus*
 - b. *Echinococcus multilocularis*
 - c. *Trichuris trichiura*
 - d. *Enterobius vermicularis*
24. A person was received in unconscious condition in the emergency. He had history of ingestion of contaminated under cooked pork. On CT scan, space occupying lesion was observed in the brain. What is the most likely diagnosis?
- a. Amebiasis
 - b. Leishmaniasis
 - c. Cysticercosis
 - d. Cerebral malaria
 - e. Meningitis
25. A 30 year old farmer developed pruritic papule on his foot, which was ignored. After a few days he experienced the signs and symptoms of eosinophilia. Which is the most likely cause to be responsible for his condition?
- a. *Schistosoma*
 - b. *Angiostoma duodenale*
 - c. *Enterobius vermicularis*
 - d. *Trichuris trichiura*
 - e. *Diphyllobothrium latum*
26. Which of the following is an antioxidant present in the cell for the removal of free radicals?
- a. Superoxide
 - b. Hydrogen peroxide
 - c. Glutathione peroxidase
 - d. Oxygen
 - e. Hydroxyl ions
27. Apoptosis is characterized by:
- a. Nucleus fragmentation
 - b. Plasma membrane disruption
 - c. Enzymatic digestion of cellular contents
 - d. Adipocytogenesis
 - e. Cellular swelling
28. A 20 year old man is evaluated for persistent cough, night sweats, low-grade fever and general malaise. He is diagnosed with pulmonary tuberculosis. Examination of his sputum in this patient will most likely demonstrate which of the following pathologic changes?
- a. Caseation necrosis
 - b. Hyaline casts
 - c. Fibrous debris
 - d. Mucoid clumps
 - e. Fungal hyphae

5/9

31. An HIV positive drug abuser is suspected of having active tuberculosis. A Mantoux test was performed which shows an induration of 10 cm after 48 hrs. Which of the following are involved in this form of hypersensitivity reaction?
- B cells and antibodies
 - Basophils and IgE
 - Immune complexes and complement
 - Plasma cells and IgM
 - T cells and macrophages
32. A 45 year old diabetic female is diagnosed with vulvovaginitis. When a smear is made, an oval shaped structure with a single bud is seen. Which of the following is the most likely organism?
- Coccidioides immitis*
 - Malassezia furfur*
 - Aspergillus fumigatus*
 - Pneumocystis carinii*
 - Candida albicans*
33. An athlete complains of discoloration and thickening of skin on his foot. The lesions are red, circular, with a vesiculated border and a central healing area. The most appropriate laboratory procedure would be:
- Potassium hydroxide mount of skin scrapings
 - Giemsa stain for multinucleated giant cells
 - Fluorescent antibody stain of vesicle fluid
 - Four fold rise in antibody titer against the organism
 - Gram stain of skin smear
34. Which statement regarding fungi is correct?
- All fungi are able to grow on yeasts and molds
 - Pseudohyphae are produced by all yeasts
 - Molds produce hyphae that may or may not be partitioned with cross walls or septa
 - The cell wall is not essential for fungal viability and survival
 - Fungi are prokaryotic organisms
35. Which of the following media is used to culture fungi?
- MacConkey medium
 - Sabouraud's dextrose agar
 - Chocolate agar
 - Eosin-methylene blue agar
 - Lowenstein Jensen's medium

6/10

...grow in the form of:

a. Yeast as well as mold
 b. None of the above
 c. Each of the following statements concerning *Cryptococcus neoformans* are correct except:
 d. The initial site of infection is usually the lung
 e. Pathogenesis is related primarily to the production of exotoxin A
 f. Its natural habitat is the soil, especially associated with pigeon feces
 g. Budding yeasts are found in the lesions
 h. Laboratory diagnosis is made by India ink preparation

19. *Candida albicans* can be distinguished by:

a. Yeast like cells
 b. Germ tube test
 c. Pseudohyphae
 d. Gram positive on Gram stain
 e. All of the above

20. Who typically develops *Pneumocystis carinii* infections?

a. People with deficient immune systems
 b. IV drug users
 c. Rose gardeners
 d. Infants
 e. Middle aged men

21. Patient came to the emergency department with history of fever, shivering and body aches and dark colored urine. Thin smear of his blood revealed crescent / banana shaped merozoites. Which of the following species of plasmodium is responsible for this condition?

a. *Plasmodium malarium*
 b. *Plasmodium vivax*
 c. *Plasmodium ovale*
 d. *Plasmodium falciparum*
 e. *Plasmodium knowlesi*

22. A 45 year old male presented with history of dysentery. Along with that he had enlarged liver, splenomegaly, pain and liver abscess. Which parasite is most likely responsible for this condition?

22) In an experiment, surgical wound sites are observed following suturing. An ingrowth of new capillaries is observed to occur within the first week. A substance elaborated by macrophages is found at the wound site to stimulate this capillary proliferation. Which of the following substances is most likely to have this function?

- a. Platelet-derived growth factor
- b. Phospholipase C-gamma
- c. Fibronectin

- d. Fibroblast growth factor
- e. Epidermal growth factor

23) A 56-year-old man has had increasing dyspnea for 6 years. He has no cough or fever. He was inhaling silica dust for many years in his job. A chest x-ray now shows increased interstitial markings and parenchymal inflammatory processes? His pulmonary problems are most likely to be caused by which of the following?

- a. Neutrophilic infiltration with release of leukotrienes
- b. Histamine release by mast cells

- d. Plasma cell production of immunoglobulin
- e. Release of growth factors by macrophages

24) 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

25) 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

26) A 25 years old female is suffering from chronic bronchial asthma. She is on steroids for her symptoms. Which of the following is MOST responsible for the anti-inflammatory activity of corticosteroids?

- a. Inhibition of Phospholipase A2
- b. Destruction of eosinophils
- c. Inhibition of cyclooxygenase

- d. Increased leukocyte adhesion to endothelial cells
- e. Inhibition of lipoygenase

27) Which of the following is the most efficient killing mechanism of neutrophils?

- a. Collagenase
- b. Reactive oxygen species
- c. Protease

- d. Myeloperoxidase
- e. Defensins

28) 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

29) The feature that differentiates primary from secondary healing is:

- a. A Inflammatory reaction
- b. Granulation tissue
- c. Wound contracture

- d. Angiogenesis
- e. Fibroblast

d. Vertical transmission

e. Through skin contact

44) A healthy person rarely suffers from bacterial infection in spite of daily inhaling, ingesting and drinking in contact with thousands of bacteria. He is protected by normal flora. Which of the following statements is NOT correct regarding normal flora?

- a. Staphylococci are the most common organisms of skin.
- b. Escherichia coli is the permanent resident of respiratory tract.
- c. Bacteroides fragilis is mainly found in colon.
- d. Lactobacilli are most common organisms of female genital tract.
- e. Viridans streptococci are found in upper respiratory tract.

45) 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

46) For sterilization of heat sensitive surgical instruments and tissues, which of the following sterilization method is most appropriate?

- a) Biphenol
- b) Formalin
- c) Ethylene oxide
- d) Acriflavine
- e) Gamma violet

47) 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

48) A diphenylamido group-positive red may develop into a pathogenic L. organism by means of a bacteriophage infection. Transfer of a donor chromosome fragment by a temperate bacterial virus is defined as which one of the following?

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

49) Virulence of bacteria is related to

- a. Toxin and enzyme production
- b. Resistance of the patient
- c. Number of bacteria
- d. Site of the portal of entry
- e. Portal of entry

50) One of the bacteria isolated from the pus smearing exudates taken from an abscess is having superoxide dismutase, catalase, and a peroxidase. Which of the following statements best describes this microorganism?

- a. Aminoglycoside antibiotics will be effective against this bacterium
- b. This bacterium is a facultative anaerobe
- c. Bacterium is an aerobic actinobacteria
- d. This bacterium is more virulent than one containing the three enzymes
- e. This bacterium will survive in an O₂ environment

Q 13 / Septic Shock + Pathophysiology

It results from arterial vasodilatation and venous blood pooling

Defn: Associated with systemic inflammation due to microbial infections, trauma and burns.

Q 14/a:

Autosomal dominant Disorder.

A pattern of inheritance in which an affected individual has one copy of affected gene and one copy of normal gene on pair of autosomal chromosome so individual with this disorder has 50% chance of passing mutant gene to children

ex: - Huntington Disease, Polycystic kidney.

Q 15:

Neoplasia:-

Mass of tissue which rate of growth exceeded can normal tissue persist in same excessive manner after cessation

Benign

- (i) Well Differentiated
- (ii) Grows Slowly
- (iii) Encapsulated
- (iv) Metastasis absent
- (v) Not invasive locally.

Malignant.

- (i) Well diff to anaplastic
- (ii) Grows Rapidly
- (iii) Unencapsulated
- (iv) Metastasis present
- (v) Locally invasive

42. PPD is an antigen derived from:
- a. *Pseudomonas putida*
 - b. *Pseudomonas aeruginosa*
 - c. *Bordetella pertussis*
 - d. *Mycoplasma pneumoniae*
 - e. *Mycobacterium tuberculosis*
43. Which of following bacteria has caused major human damage in the past?
- a. *S. aureus*
 - b. *Bordetella pertussis*
 - c. *Shigella dysenteriae*
 - d. *Yersinia pestis*
 - e. *H. pylori*
44. A component unique to gram negative bacteria is:
- a. Lipid A
 - b. Polysaccharide capsule
 - c. Penicillin binding protein
 - d. Peptidoglycan
 - e. None of the above
45. An organism's ability to produce hydrogen sulfide may be tested by using:
- a. Triple sugar iron agar
 - b. Simmons citrate agar
 - c. MacConkey agar
 - d. Nutrient agar
 - e. Thioglycollate agar
46. *Staph. epidermidis* is best differentiated from *Streptococcus viridans* by:
- a. Coagulase test
 - b. Catalase test
 - c. Gram stain
 - d. Peptidoglycan thickness
 - e. All of the above
47. Which toxin blocks the acetylcholine release from the cholinergic nerve endings resulting in a flaccid paralysis?
- a. Epidermolytic toxin
 - b. Anthrax toxic complex
 - c. Tetanus toxin
 - d. Botulinum toxin
 - e. None of the above
48. Which organism produces atrophic gastritis?
- a. *Helicobacter pylori*
 - b. Enterotoxigenic *E. coli*
 - c. Enterohemorrhagic *E. coli*
 - d. Enteropathogenic *E. coli*
 - e. Both a and b

8/10

35. A 30 year old female presented with history of vaginal discharge and itching. A previous history of antibiotic use is present. Diagnosis of candidiasis is made initially. Which of the following organism of normal flora would have been suppressed causing this type of infection?
- Staphylococcus aureus*
 - Pseudomonas aeruginosa*
 - Haemophilus species*
 - Clostridium species*
 - Lactobacillus species*
37. Which of the following statements is incorrect regarding endotoxins?
- They are integral part of cell wall of gram negative bacteria
 - Endotoxins are not used as antigens in any available vaccine
 - They are integral part of cell wall of gram positive bacteria
 - They are the most important cause of septic shock
 - They are lipopolysaccharides in nature
38. The main host defense against bacterial exotoxin is:
- Activated macrophages secreting proteases
 - IgG and IgM antibodies
 - Helper T cells
 - Modulation of host cell receptors in response to toxin
 - C3a and C5a component of complement system
39. A house officer is going to draw blood sample for blood culture. He has been advised to treat the skin with 2% Iodine before the sample is taken. The reason for this is:
- It will lead to growth of maximum number of bacteria
 - Culturing of specimen is made easier by this process
 - Less time is required for positive results to obtain
 - It will prevent contamination by normal skin flora
 - All of the above are true
40. Growth of *M. tuberculosis* in serpentine cords is mainly due to:
- Trehalose 6,6 - dimycolate
 - Tween 80 in the medium
 - Egg yolk in the medium
 - Serpentine growth factor in the medium
 - Peptidoglycan in the medium
41. Arthropod vector for Rocky Mountain Spotted fever is the:
- Louse
 - Flea
 - Tick
 - Mite
 - All of above

7. Autocrine growth regulation plays a role in:
- a. Tumor
 - b. Connective tissue
 - c. Hormone secretion by endocrine organ
 - d. Primary wound healing
 - e. Collagen formation
8. A change in the differentiation of a cell from one type to another is:
- a. Regeneration
 - b. Developmental plasticity
 - c. Vasculogenesis
 - d. Angiogenesis
 - e. Trans-differentiation
9. Well differentiated tumor reveals:
- a. Complete loss of differentiation
 - b. Resemblance with the normal tissue
 - c. Anaplasia
 - d. Lymphatic invasion
 - e. Increased number of abnormal mitosis
10. A young man presents with yellowing of sclera, & skin. Which of the following accumulations underlies these findings?
- a. Bilirubin
 - b. Hemosiderin
 - c. Lead
 - d. Melanin
 - e. Silver
11. Which of the following is characteristic in diabetic patient?
- a. Caseous necrosis
 - b. Liquefactive necrosis
 - c. Wet gangrene
 - d. Dry gangrene
 - e. Fibrinoid necrosis
12. There is swelling in parotid gland due to stones. Which of the following changes is seen in the gland?
- a. Hyalinization
 - b. Apoptosis
 - c. Necrosis
 - d. Degeneration
 - e. Free radical injury
13. An old man presented in clinic with brown atrophy. Which of the following pigments is associated with it?
- a. Lead
 - b. Hemosiderin
 - c. Melanin
 - d. Lipofuscin
 - e. Argyria

2/10

22

MBBS 6th Year (2nd Entry)
(Pathology-Objective Part)

Sendup

Time Allowed: 1 hour

Total Marks: 80

Roll No:

Instructions:

Past MCQs

- All objective questions are to be answered on the paper and returned to the invigilator within specified time after you have received the question paper.
- 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.

Choose the best answer. 01 mark for each MCQ.

- Epidemic typhus is caused by:
 a. Rickettsia typhi
 b. Rickettsia prowazekii
 c. Rickettsia rickettsii
 d. Rickettsia conorii
 e. Both a & b are true
- Mycoplasmas have the following characteristics except:
 a. Mycoplasmas can be cultured from urinary tract
 b. Direct microscopic examination of a specimen for mycoplasmas is useless
 c. The Mycoplasmas protein are rich in proline which is important in adherence
 d. Flammagan and other inhibitor tests can be applied to diagnose chlamydial infection
 e. Are susceptible to penicillin G
- Which of the following bacteria produce black color in bile esculin agar?
 a. Group A beta Hemolytic Streptococci
 b. Pneumococci
 c. Enterobocci
 d. All of the above
 e. None of the above
- Types 1-8 of Pneumococci are responsible for what percentage of pneumococcal pneumonia?
 a. 15%
 b. 30%
 c. 55%
 d. 70%

1/9 (34)

- Which of the following is not a constituent of *Listeria monocytogenes*?
- Interleukin A
 - Capsule polysaccharides
 - Interleukin B
 - Interleukin D
 - Flagellin
6. Food commonly involved in *Salmonella enteritidis* food poisoning is:
- Green beans
 - Baked potato
 - Fried rice
 - All of the above
 - None of the above
7. Which of the following is not a common commensal of skin?
- Staphylococcus aureus*
 - Diphtheroids*
 - Moraxella*
 - Staphylococcus epidermidis*
 - Staphylococcus pyogenes*
8. Which of the following statements is incorrect regarding endotoxin?
- Toxicity of endotoxin is low in comparison with exotoxin
 - Endotoxins are not used as antigens in any available vaccine
 - They are integral part of cell wall of Gram positive bacteria
 - They are the most important cause of septic shock
 - They can lead to activation of coagulation cascade
9. The identification of bacteria by serological tests is based on the presence of specific antigens. Which one of the following bacterial components is least likely to contain useful antigens?
- Capsule
 - Flagella
 - Cell wall
 - Ribosomes

10. Genetic transfer, which results in genetic variation can be done in all the following ways except:

- Transformation
- Conjugation
- Transduction
- Vertical transmission

49. The clostridium difficile
- a. Is non-motile organism
 - b. Produces polypeptide capsule of poly D-glutamic acid
 - c. Can grow in the presence of 10% oxygen
 - d. Causes antibiotic associated diarrhea
 - e. All of the above
50. Which organism is a major cause of acute bacterial infections in children worldwide and is responsible for meningitis in young children?
- a. Haemophilus influenzae type B
 - b. Haemophilus ducreyi
 - c. Bordetella pertussis
 - d. Brucella abortus
 - e. None of the above
51. Acute gingivostomatitis is caused by:
- a. Adenovirus
 - b. Cytomegalovirus
 - c. Respiratory syncytial virus
 - d. JC virus
 - e. Herpes simplex virus type 1
52. Which viruses have an envelope?
- a. Calciviruses
 - b. Rhinoviruses
 - c. Human wart viruses
 - d. Rhinoviruses
 - e. Togaviruses
53. Which of the following viruses require a helper virus to form virions?
- a. JC virus
 - b. B19 virus
 - c. Adenoviruses type 40 and 41
 - d. Hepatitis D virus
 - e. Both c and d
54. In which viruses does the primary transcription product of the viral genome get processed to mRNA in the nucleus?
- a. Retroviruses
 - b. Rhinoviruses
 - c. Enteroviruses
 - d. Togaviruses
 - e. Poxviruses
55. Rabies is a disease caused by:
- a. A naked DNA virus
 - b. A naked RNA virus
 - c. A member of rhabdovirus family
 - d. A virus infected mite
 - e. Both b and c are true

33
9/10

43. Excessive fibroblast proliferation & collagen production may lead to a mass several centimeter across commonly known as:
- a. Keloid
 - b. Keloid nodule
 - c. Keloid scar
 - d. Keloid tumor
 - e. Keloid abscess
44. Repair is necessary when there is tissue loss. This is known as:
- a. Intentional injury
 - b. Healing by intent
 - c. Healing by second intention
 - d. Unintentional healing
 - e. Healing by first intention
45. Tissue distortion resulting in permanent shortening of muscle is known as:
- a. A stricture
 - b. Contraction
 - c. Stenosis
 - d. Adenexis
 - e. Restricture
46. Which of the following is not an important factor contributing to the phenomenon of emerging viral diseases?
- a. War
 - b. International air travel
 - c. Organ transplantation
 - d. Antibiotic resistance
 - e. None of the above
47. Which of the following viruses does not use respiratory route for entry in human body?
- a. Coronavirus
 - b. Herpesvirus
 - c. Adenovirus
 - d. Poxvirus
 - e. Paramyxovirus
48. Multinucleated giant cells are associated with which of the following viruses?
- a. Varicella major
 - b. Coxsackievirus
 - c. Molluscum contagiosum
 - d. Varicella zoster
 - e. All of the above
49. Which of the following geographic areas has least endemicity (<2%) of hepatitis B?
- a. Eastern Europe
 - b. Southern Asia
 - c. Africa
 - d. Central Asia
 - e. Australia

7/6

20. A 40 year female is found with changes in cervical lining from normal pseudostratified columnar to squamous epithelium. Which of the following cellular adaptation occur?
- a. Atrophy
 - b. Metaplasia
 - c. Desmoplasia
 - d. Hyperplasia
 - e. None of above
21. On autopsy of an old man with Alzheimer disease, there is shrinkage of brain matter with reduced vascularity. This change is due to:
- a. Aplasia
 - b. Atrophy
 - c. Hyperplasia
 - d. Hypertrophy
 - e. Metaplasia
22. A bedridden elderly patient experiences the sudden onset of pleuritic pain and hemoptysis. The underlying lesion that led to this complication was most likely located in which of the following sites?
- a. Hepatic veins
 - b. Lower extremity veins
 - c. Portal vein
 - d. Pelvic veins
 - e. Pulmonary veins
23. A young man undergoes surgery for fractures of the pelvis and left femur. The following day he develops dyspnea, speech difficulties, & petechial skin rash. Which of the following types of embolism is the likely cause of these findings?
- a. Air
 - b. Amniotic fluid
 - c. Fat
 - d. Paradoxical
 - e. Thrombotic
24. An elderly male with a history of recurrent 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
 - e. Septic shock

4/10

14. A patient presented with mental retardation, epicanthal folds, & simian crease. Which of the following is associated with this patient?
- a. Trisomy 21
 - b. Trisomy 15
 - c. Trisomy 13
 - d. 47,XXY
 - e. XXY
15. Marfan syndrome patients has following abnormal fibers
- a. Collagen
 - b. Fibrillin
 - c. Elastin
 - d. Laminin
 - e. None of the above
16. Hyperplasia is primarily operative in which of the following growth alterations?
- a. Thickened bladder wall in a patient with urethral obstruction
 - b. Appearance of a affected kidney in renovascular hypertension
 - c. Barret's esophagus in a patient with gastroesophageal reflux
 - d. Enlarged left atrium in a patient with severe mitral stenosis
 - e. Galactorrhea in a woman with prolactinoma
17. A young girl is found to have only one kidney on radiologic imaging. Which of the following terms is most descriptive of this finding?
- a. Agenesis
 - b. Atrophy
 - c. Hyperplasia
 - d. Hypoplasia
 - e. Metaplasia
18. A middle aged woman is investigated for hypertension & is found to have enlargement of the left kidney. The right kidney is smaller than normal. Contrast studies reveal stenosis of the right renal artery. The size change in the right kidney is an example of the following adaptive change?
- a. Aplasia
 - b. Atrophy
 - c. Hyperplasia
 - d. Hypertrophy
 - e. Metaplasia
19. In pregnancy uterus is enlarged due to process of
- a. Hypertrophy
 - b. Hyperplasia
 - c. Metaplasia
 - d. a and b both
 - e. All of above

30
3/12

- a. Envelopes glycoproteins in ZIC
- b. Cells are self-cleaning antibodies
- c. Induces chemokine production
- d. is highly conserved among different isolates
- e. Causes membrane fusion
- f. Binds to viral receptor on cell surface

51. The most important cytokine involved in the formation of epithelioid cells is:

- a. IL-6
- b. Interferon Gamma
- c. PGI2
- d. β interferon
- e. IL-7

52. Langhans type of giant cells are seen in:

- a. Anthracosis
- b. Tuberculosis
- c. Silicosis
- d. Systemic Lupus Erythematosus
- e. Dermatitis

53. The major role of Nitric oxide (NO) in inflammation is:

- a. Inducing pain
- b. Vasodilatation
- c. Chemotaxis
- d. Adhesion of leukocytes on endothelial cells
- e. Increased vascular permeability

54. A patient is suffering from chronic cough and fever. He has multiple cavitating lesions on chest X-ray. His bronchoscopic biopsy is done and it shows central caseation, epithelioid cells with a rim of lymphocytes around it. Which type of inflammation is he suffering from?

- a. Acute inflammation
- b. Purulent inflammation
- c. Fibrous inflammation
- d. Granulomatous inflammation
- e. Serous inflammation

55. A ten year old child accidentally touches a pot of boiling water. Within few hours there is marked erythema of the skin of the fingers and small blisters appear on the finger pads. Which of the following terms best describes the process?

- a. Fibrous inflammation
- b. Purulent inflammation
- c. Serous inflammation
- d. Ulceration
- e. Granulomatous inflammation

8/9

(26)

Past MCQ

(Patho)

1. Which of the following substance has the potential of chemotactic activity?
 a. C5a
 b. Flucosyl transferase
 c. Integrins
 d. Selectin
 e. TNF
2. Vasodilation in acute inflammation is mainly caused by:
 a. Bradykinin
 b. Nitric oxide & neutrophils
 c. Nitric oxide & histamine
 d. Histamine
 e. TNF- α
3. Chronic Non-specific inflammation is found in:
 a. Scalded Skin Syndrome
 b. Tuberculosis
 c. Sarcoidosis
 d. Crohns Disease
 e. Chronic Broncheictasis
4. Acute-Phase proteins are responsible for:
 a. Diapedesis
 b. Chemotaxis
 c. Exudate formation
 d. Pavementing
 e. Fever
5. Foreign body type of giant cells are seen in:
 a. Fungal infections
 b. Chemotaxis
 c. Blister formation
 d. Opsonization
 e. Phagocytosis
6. Ulceration is a morphological type of an acute inflammation seen in:
 a. Arthritis
 b. Diarrhoea
 c. Typhoid
 d. Fractures
 e. Blister formation

(29)

(1/10)

56. Pandemics of influenza are the result of:
- a. Genetic reassortment during assembly
 - b. Production of defective influenza viruses
 - c. Phenotypic mixed during assembly
 - d. Transmission of viruses by arthropods
 - e. Both a and c are true
57. A young boy presented with perianal pruritis & itching for the last few days. He had history of not properly washing his hands before meals. His scotch tape preparation was positive. Which one of the following is the most likely causative agent?
- a. *Echinococcus granulosus*
 - b. *Necator americanus*
 - c. *Ankylostoma duodenale*
 - d. *Enterobius vermicularis*
 - e. *Diphyllobothrium latum*
58. A young man presented with dysentery, enlarged liver, right hypochondriac pain and liver abscess. Which parasite is most likely responsible for his condition?
- a. *Giardia lamblia*
 - b. *Entamoeba histolytica*
 - c. *Cryptosporidium*
 - d. *Balantidium coli*
 - e. *Cyclospora*
59. A patient presented with fever, shivering and body aches. *Plasmodium vivax* was identified on thick blood film. It is responsible for which type of malaria?
- a. Benign tertian malaria
 - b. Quartan malaria
 - c. Malignant tertian malaria
 - d. Benign Quartan malaria
 - e. Black water fever
60. An HIV positive patient developed watery non-bloody diarrhea. His fecal smear revealed oocysts, stained positively with modified ZN staining technique. What is the most likely causative agent?
- a. *Toxoplasma gondii*
 - b. *Giardia lamblia*
 - c. *Entamoeba histolytica*
 - d. *Cryptosporidium*
 - e. *Diphyllobothrium latum*

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- Envelope glycoprotein 120:
 - a. Falls to viral neutralizing antibodies
 - b. Induces chemokine production
 - c. Is highly conserved among different HIV-1 strains
 - d. Causes membrane fusion
 - e. Binds to viral receptors on cell surface

51. The most important cytokine involved in the formation of granuloma is:

- a. IL-1
- b. Interferon Gamma
- c. TNF
- d. Interleukin
- e. IL-2

52. Langhans type of giant cells are seen in:

- a. Tuberculosis
- b. Foreign body
- c. Sarcoidosis
- d. Systemic lupus erythematosus
- e. Dermatitis

53. The major role of Nitric oxide (NO) in inflammation is:

- a. Inducing pain
- b. Vasodilatation
- c. Chemotaxis
- d. Adhesion of leukocytes on endothelium
- e. Increased vascular permeability

54. A patient is suffering from chronic cough and fever. He has multiple nodular lesions on chest X-ray. His bronchoscopic biopsy is done and it shows central caseation, epithelioid cells with a rim of lymphocytes around it. What type of inflammation is he suffering from?

- a. Acute inflammation
- b. Purulent inflammation
- c. Fibrous inflammation
- d. Granulomatous inflammation
- e. Serous inflammation

55. A ten year old child accidentally touches a pot of boiling water. Within few hours is marked erythema of the skin of the fingers and small blisters appear on the pads. Which of the following terms best describes the process?

- a. Fibrous inflammation
- b. Purulent inflammation
- c. Serous inflammation
- d. Ulceration
- e. Granulomatous inflammation

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