

- a. Potassium hydroxide mount of skin scrapings
- b. Giemsa stain for multinucleated giant cells
- c. Fluorescent antibody stain of vesicle fluid
- d. Four fold rise in antibody titer against the organism
- e. Gram stain of skin smear

29. A chronic diabetic, experienced nephropathy and was admitted in intensive care unit for management. A fungus was isolated from the culture of his catheter tip, staining positively with Gram staining. Apart from that germ tube test was also positive. The causative agent is:

- a. *Cryptococcus neoformans*
- b. *Candida albicans*
- c. *Candida tropicalis*
- d. *Rhizopus*
- e. *Mucor*

30. A 60 year old immigrant from Argentina experiencing upper right quadrant abdominal pain, nausea and vomiting. He is taken to emergency room in a nearby hospital by his wife. A CT-scan reveals a large mass in his liver. History reveals that the man has many pet dogs. What is the most likely diagnosis?

- b. *Taenia saginata*
- c. *Echinococcus granulosus*
- d. *Diphyllobothrium latum*
- e. *Cysticercosis*
- f. *Hymenolepis nana*

18. *Chlamydia trachomatis* is a well-known cause of venereal disease. This organism is also implicated in which of the following?
- Blindness in neonates
  - Middle-ear infection in young children
  - Perinatal retinitis
  - Sexually transmitted cardiac disease in adults
  - Urinary tract infection in children
19. A 25-year old male presents with a macula-papular rash on palms and soles. He gives history of developing a non-tender ulcer on the genital area 3 months back which healed spontaneously. Currently, the patient is suffering from:
- Primary syphilis
  - Secondary syphilis
  - Early latent stage of syphilis
  - Late latent stage of syphilis
  - Tertiary syphilis
20. Delta (HDV) hepatitis only occurs in patients who also have either acute or chronic infection with hepatitis B virus. The delta agent is:
- An incomplete hepatitis B virus
  - Related to hepatitis A virus
  - A hepatitis B virus mutant
  - A defective RNA virus
  - Hepatitis C virus mutant
21. A young boy was received in emergency department with history of fever, malaise, headache and myalgia. 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:
- Yellow fever virus
  - Dengue virus
  - West Nile virus
  - St. Louis encephalitis virus
  - California encephalitis virus
22. A newer virus first detected in 1994 has genomic size of about 165 Kbp. This virus is said to be the cause of Kaposi's sarcoma and body cavity lymphomas. Identify this virus.
- Epstein Barr virus
  - Human Herpes virus 6
  - Human Herpes virus 7
  - Human Herpes virus 8
  - All of the above

13. Which of the following bacteria is the cause of dysentery and has same mechanism as the enterohemorrhagic strain of *E. coli*?
- Shigella*
  - Salmonella*
  - Proteus*
  - E. coli*
  - Pseudomonas*
14. A patient is admitted to the hospital due to severe epigastric pain, indigestion, excess of gas production. Culture reveals a urease positive, gram negative, curved rod. Which of the following is a likely complication due to infection with the causative agent?
- Diarrhea
  - Kidney stones
  - Pseudomembranous colitis
  - Duodenal ulcer
  - Vomiting
15. A group of 10 family practice residents who had a potluck 4 days ago now have diarrhea with abdominal cramps, general malaise, and fever ranging from 37.5C to 38.7C. Stools from 3 are blood tinged. Lab studies revealed the causative agent was a micro-aerophilic gram negative, curved rod with polar flagella often in pairs to give a seagull appearance. It grew on Skirrow's media at 42 C. The original contamination was probably found in:
- Poultry
  - Improperly canned food
  - Fried rice
  - Fish
  - Vegetables
16. Which of the following is not a common characteristic of family enterobacteriaceae?
- All the members are Gram -ve Rods
  - All are Non-spore forming
  - All are Nitrate reducers
  - All are Oxidase +ve
  - All are lactose fermenters
17. The primary lesion of tuberculosis in lung "the Ghon complex" comprise of:
- Parenchymal exudative lesion in lung and draining hilar lymph nodes
  - Only parenchymal exudative lesion in lung
  - Hilar lymphadenopathy
  - Parenchymal exudative lesion in lymph nodes
  - Cervical lymphadenopathy and parenchymal exudative lesion in lung

- d) Lack of apoptosis
- e) Gene amplifications
- d) Reduced DNA repair
- e) Loss of cell cycle inhibition

Q 8. A 65 years old male presented in CPEI with moon face and central obesity. He was found to have Cushing syndrome due to release of Corticosteroids. Doctor was very much worried as he was suspecting a tumour what other organs he should examine apart from adrenals in search of tumour.

- a- Testis
- b- GIT
- c- Lung
- d- Parathyroid
- e- Heart.

Q. 9 A 66 year old man with chronic cough has an episode of hemoptysis. On physical examination, there are no abnormal findings. A chest radiograph shows a 6-cm mass in the right lung. A sputum cytologic analysis shows cells consistent with squamous cell carcinoma. Metastases from this neoplasm are most likely to be found at which of the following sites?

- a) Chest wall muscle
- b) Splenic red pulp
- c) Hilar lymph nodes
- d) Vertebral bone marrow
- e) Cerebrum

Q. 10 A 42 year old man is concerned about a darkly pigmented "mole" on the back of his hand. The lesion has enlarged and bled during the past month. On physical examination, there is a slightly raised, darkly pigmented, 1.2-cm lesion on the dorsum of the right hand. The lesion is completely excised. Microscopically, a malignant melanoma is present. Which of the following factors presents the greatest risk for the development of this neoplasm?

- a) Smoking tobacco
- b) Ultraviolet radiation
- c) Chemotherapy
- d) Asbestos exposure
- e) Allergy to latex

Q. 11 A clinical study involves patients diagnosed with carcinoma whose tumor stage is T4N1M1. The patients' survival rate 5 years from the time of diagnosis is less than 50% regardless of therapy. Which of the following clinical findings is most likely to be characteristic of this group of patients?

- a) Cachexia

- a. Ascaris lumbricoides
  - b. Ankylostoma duodenale
  - c. Enterobius vermicularis
  - d. Necator americanus
  - e. Trichuris trichiura
169. Which of the following is not a cestode?
- a. Taenia solium.
  - b. Diphylobothrium latum.
  - c. Echinococcus granulosus
  - d. Hymenolepis nana.
170. Enterobius vermicularis  
 A patient presented in emergency with right hypochondrial pain. Ultra sound of abdomen showed large unilocular cyst in liver. Which of the following is the causative agent?
- a. Taenia solium
  - b. Taenia saginata
  - c. Echinococcus granulosus
  - d. Diphylobothrium latum
  - e. H. nana
171. Which of the following specie of schistomes can lead to carcinoma of bladder?
- a. Schistosoma mansoni
  - b. Schistosoma americanum
  - c. Schistosoma haematobium →
  - d. Schistosoma japonicum
  - e. Schistosoma africanum
172. Which of the following media is used to culture fungi?
1. Blood agar
  2. MacConkey's agar
  3. Serum dextrose agar
  4. Sabouraud dextrose agar →
  5. EMG agar
173. Fungi that invade skin, hair, nails and mucous membranes are classified as:
- a. Superficial
  - b. Cutaneous
  - c. Subcutaneous
  - d. Systemic
  - e. Opportunistic
174. body.  
 Which of the following are not correctly matched?
- a. Tinea corporis - groins
  - b. Tinea capitis - scalp
  - c. Tinea pedis - athlete's foot
  - d. Tinea barbae - beard
  - e. Tinea cruris - jock itch
- groin

- a. Mother  
b. Father  
c. Both  
d. 20% Mother's side  
e. 60% Father's side
86. On TSI agar vibrio shows:
1. Alkaline slant acid butt
  2. Acid butt acid slant
  3. Acid slant alkaline butt
  4. Acid slant acid butt with H<sub>2</sub>S production
  5. Alkaline slant alkaline butt
87. Cholera toxin causes:
1. Stimulation of adenylyate cyclase
  2. Inhibition of adenylyate cyclase
  3. Stimulation of guanylyate cyclase
  4. Inhibition of guanylyate cyclase
  5. Both 'A' and 'C' are correct

88. A 10 yrs old girl presents with acute onset of lower limb weakness associated with fever and foul smelling bloody diarrhea. The most likely cause of infection is:

1. Vibrio cholerae
  2. Vibrio para haemolyticus
  3. Campylobacter jejuni
  4. Campylobacter intestinalis →
  5. Helicobacter pylori
89. MALT lymphomas are associated with:

1. Campylobacter jejuni
2. Helicobacter pylori →
3. Vibrio cholerae
4. Hemophilus influenzae
5. Yersinia pestis

90. A 25 yrs old male presents to ENT specialist with severe ear ache and greenish ear discharge. He is a regular swimming pool user. Pus culture shows non lactose fermenting colonies on MacConkey's agar. The most likely cause of infection is:

- d. *Enterobius vermicularis*  
 e. *Necator americanus*
163. Which of the following parasite having no intermediate host can lead to autoinfection?  
 a. *Echinococcus granulosus*  
 b. *Enterobius vermicularis*  
 c. *Ankylostoma duodenale*  
 d. *Ascaris lumbricoides*  
 e. *Hymenolepis nana*
164. An eight year old presented with perianal pruritis associated with itching for the last few days. The boy 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*
165. A 30 year old farmer having history of walking bare footed in the fields, developed pruritic papule on his foot ignored by him. After a few days he experienced the signs and symptoms of pneumonia with eosinophilia on blood complete picture. What is the diagnosis?  
 a. *Schistosoma*  
 b. *Ankylostoma duodenale*  
 c. *Enterobius vermicularis*  
 d. *Trichuris trichiura*  
 e. *Diphyllobothrium latum*
166. Which of the parasite has dog as the definitive host?  
 a. *Taenia saginata*  
 b. *Echinococcus granulosus*  
 c. *Echinococcus multilocularis*  
 d. *Trichuris trichiura*  
 e. *Enterobius vermicularis*
167. A young boy had history of ingesting under cooked fish from a new restaurant and he developed megaloblastic anemia afterwards. Which of the following is the causative agent?  
 a. *Diphyllobothrium latum*  
 b. *Ascaris lumbricoides*  
 c. *Ankylostoma duodenale*  
 d. *Enterobius vermicularis*  
 e. *Taenia solium*
168. Which of the following nematode can lead to Lofflers syndrome?
- D latum*

Q-20 A resident on the day shift was examining a slide from bladder carcinoma. He was asked to describe the histology of the tumour, which of the following is characteristic for bladder carcinoma?

- a- Squamous metaplasia of transitional epithelium
- b- Row of transitional cells
- c- Row of transitional cells of stratified
- d- Normal transitional epithelium
- e- Transitional cells of stratified

Q-21 A resident on the day shift was examining the slide prostate tumour which his resident told him that it was a carcinoma. So what are things he should look for to call this tumour a carcinoma?

- a- Cellular atypia similar to parent cell
- b- Loss of polarity
- c- High N/C ratio, pleomorphism, anaplasia
- d- Only increased mitoses are enough to call it a malignant
- e- Desmoplastic reaction of tumour cells

Q-22 A resident pathologist was examining the slide of Meckel's Diverticulum. His senior resident said that the lining epithelium should be same as that of colonic epithelium. But he was surprised to see gastric mucosa in lamina propria. What is actually this called as?

- a- Teratoma
- b- Mixed tumour
- c- Heterotopia
- d- Hamartoma
- e- Neoplasia

Q-24 You are asked to examine a slide of a tumour arising from smooth muscle cells of myometrium. The tumour is composed of bundles and fascicles of oval to spindle cells with little pleomorphism and mitosis, areas of tumour necrosis are seen. Suddenly the number of mitosis increases and cells become enlarged with big giant sized nuclei, looking horrible. This transition of less bad to too bad is called as:

- a- Anaplasia
- b- Metaplasia
- c- Dysplasia
- d- Severe dysplasia
- e- Carcinoma



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Test No. 10111111 10-07-2018  
MBBS 1<sup>st</sup> Year

5

Time 25 min

Total Marks 25

Q. 1 A 44 year old woman sees her physician because she feels lumps in the right breast. The physician notes right axillary lymphadenopathy on physical examination. The masses are mobile but firm. She had also history of hard fixed lump in upper quadrants of breast. Which of the following is the most likely diagnosis?

- a)  Ductal carcinoma of breast
- b) Acute mastitis with breast abscess
- c) Leiomyosarcoma of the uterus
- d) Cerebral glioblastoma multiforme
- e) Squamous dysplasia of the lungs

Q. 2 A 32 year old woman has experienced dull pelvic pain for the past 2 months. Physical examination shows a right adnexal mass. An abdominal ultrasound shows a 7 cm right adnexal ovarian mass. The mass is surgically excised. The surface of the mass is smooth. On gross examination, the mass is cystic and filled with hair. Microscopically, epithelial cells, columnar glandular epithelium, cartilage, and fibrous connective tissue are present. Which of the following is the most likely diagnosis?

- a) Adenocarcinoma
- b) Fibroadenoma
- c) Glioma
- d) Hematoma
- e)  Teratoma

Q. 3 An epidemiologic study investigates the potential cellular molecular alterations that contribute to the development of cancers in a population. Data analyzed from reticulocytosis lesions show that changes are occurring that show the evolution of a sporadic benign adenoma into an invasive carcinoma. Which of the following best describes the mechanism of these changes?

- a) Activation of proto-oncogenes by chromosomal translocation
- b)  Step-wise accumulation of multiple proto-oncogene and tumor suppressor gene mutations
- c) Extensive regeneration of tissues increasing the mutation rate

Q-25 A female has a known family history of breast carcinoma and she is worried that she may develop a tumour as well. Doctor asks her to be vigilant and do some tests on yearly basis. Can you guess?

- a- PCR
- b- FISH
- c- Mammogram
- d- Ultrasound of breast with yearly mammogram
- e- Only ultrasound and regular self examination

4. Extra chromosomal double stranded circular DNA molecules that are capable of replication independently of bacterial chromosomes and responsible for the transmitting bacterial resistance genes is:
  - a. Mesosomes
  - b. Transposons
  - c. Nucleoids
  - d. Plasmids
  - e. Spores
5. Laboratory results of a clinical specimen from a patient with hospital-acquired pneumonia revealed the presence of methicillin-resistant *Staphylococcus aureus* (MRSA). Which of the following drugs is the best empiric treatment?
  - a. Ceftazidime
  - b. Dicloxacillin
  - c. Penicillin
  - d. Tobramycin
  - e. Vancomycin
6. An outbreak occurs in community due to contaminated water supply. Patients came with nausea and vomiting as well as profuse diarrhea with abdominal cramps. Stools had rice water appearance. Curved comma shaped Gram negative rods were isolated. Which of the following is the selective media used for culturing it?
  - a. Blood agar
  - b. TCBS agar
  - c. MacConkey agar
  - d. Chocolate agar
  - e. Thayer martin medium
7. Gram staining of urine sample of a patient suspected to have urinary tract infection revealed Gram negative rods. Which of the following structure is found in gram negative bacteria but not in gram positive bacteria?
  - a.
  - b. Capsule
  - c. Cell wall
  - d. Cytoplasmic membrane
  - e. Ribosomes
  - f. Outer membrane

157. Which of the following tumor markers is considered to of ovarian carcinoma?
- a. CA19-9 → *colorectal cancer*
  - b. CA-125
  - c. CEA
  - d. P53
  - e. PAP
158. Alpha feto protein is considered to be tumor marker of which of the following organ?
- a. Liver
  - b. Pancreas
  - c. Stomach
  - d. Colon
  - e. Lung
159. Which of the following statement is not correct regarding the role of IHC (immunohistochemistry) in histopathology?
- a. To determine the line of differentiation
  - b. To determine the site of origin of metastatic tumor
  - c. To determine the degree of anaplasia
  - d. To categorize leukemia/lymphoma
  - e. Detection of molecules that of prognostic & therapeutic significance
160. Hypercalcemia is a considered to be paraneoplastic syndrome of which of the following tumors?
- a. Ovarian carcinoma
  - b. Pancreatic carcinoma
  - c. Hepatocellular carcinoma
  - d. Squamous cell carcinoma of lung
  - e. Basal cell carcinoma
161. A 70/F presented to medical OPD with history of weight loss, anorexia, intestinal obstruction & malena. What is the most probable diagnosis of this patient based on clinical signs & symptoms?
- a. Tumors of bladder
  - b. Tumors of lung
  - c. Tumors of GIT
  - d. Tumors of skin
  - e. Tumors larynx
162. Which of the following nematode is also known as whip worm?
- a. Ascaris lumbricoides
  - b. Ankylostoma duodenale
  - c. Trichuris trichiura

- a. Cloptophamide
- b. Benzopyrene - lung
- c. Aflatoxin B1
- d. Betaf Nit
- e. Nitrosamines

3. right → bladder  
4. → liver

Q-17 A 65 years old female presented with bilateral ovarian masses. The patient also has a previous history of carcinoma stomach, what are these tumours in ovaries called as

- a. Krukenberg tumour
- b. Kistatin tumour
- c. Sister Mary Joseph nodule
- d. Undifferentiated tumour
- e. Adenocarcinoma

Q-18 A 60 years old male presented with adenocarcinoma colon. 10 years back he had a history of adenomas with multiple genetic changes. Which of the following mechanisms is actively involved in formation of tumour.

- a. Self sufficiency in growth signals
- b. In sensitivity to growth inhibitory signals
- c. Insensitivity to growth signals
- d. Apoptosis
- e. Inability to invade and metastasize

Q-19 Which factor is responsible for sustained angiogenesis for spread of tumour

- a. VEGF
- b. ECM
- c. FGF
- d. Epidermal growth factor
- e. Platelet derived growth factor.

Q-20 A 45 years old female presented with breast carcinoma and the tumour is also showing metastasis. The tumour is found to have a malignant cytology with hyperchromatic nuclei and anaplasia, which pathway this tumour has adapted to reach the metastatic site

- a. Vascular spread
- b. Lymphatic spread
- c. Direct invasion
- d. Seeding of body cavities
- e. Intragenic spread.

- a) Cardiac murmur
- b) Icterus
- c) Loss of sensation
- d) Splenomegaly

Q-12 A patient came to emergency with fever, malaise, weight loss and pallor of skin. The patient is a known case of cirrhosis of liver. Ultrasound of liver reveals a mass which has infiltrative pattern. What is the most important cause of his disease.

- a) Alcohol consumption ✓
- b) Cigarette smoking
- c) Environmental carcinogen
- d) UV light
- e) Non infectious agents.

Q-13 When dysplastic changes are marked and involve the full thickness of the epithelium but the lesion doesn't penetrate the basement membrane, it is called as

- a) Carcinoma in situ ✓
- b) Severe dysplasia
- c) Mild dysplasia
- d) Moderate dysplasia
- e) Anaplasia

Q-14 CEA is a tumour marker for the diagnosis of

- a. Prostatic carcinoma
- b. Breast carcinoma
- c. Endometrial carcinoma
- d. Colonic carcinoma ✓
- e. Gastric carcinoma

Q-15 The breast cancer risk in females inheriting mutated copies of which tumor suppressor genes?

- a) BRCA1 and BRCA2 ✓
- b. KRAS
- c. Cytochrome P450
- d. Proto-oncogenes
- e. Apoptosis regulatory genes

Q-16 A patient came to the emergency department with severe cough, fever weight loss, and haemoptysis. The patient is a known case of adenocarcinoma lung. Which chemical carcinogen is involved for causing this neoplasm.

23. A patient presented with non- bloody diarrhea, flatulence and abdominal pain. She gave history of drinking contaminated water. Stool examination showed cysts in faeces. The trophozoites of this organism are pear drop shaped or pear shaped with a sucking disc at its anterior end. The most likely organism is:
- Malariae falciparum
  - Hook worm
  - Giardia lamblia
  - Hyamenolepis nana
  - Taenia solium
24. A patient taking anti malarial drugs irregularly for chronic falciparum malaria now presented with complain of dark or black colored urine. Black water fever was diagnosed. The dark color of the urine is because of:
- presence of malarial parasites in urine
  - hemolysis destroying affected parasitized RBCs and unaffected RBCs
  - Presence of proteins in urine
  - Excretion of the anti-malarial drugs in urine
  - Excretion of glucose
25. Abdominal ultrasound of a patient showed liver abscess. The pus was aspirated and examined which showed amoebic trophozoites. Which of the following is the characteristic of the liver abscess caused by amoebic dysentery?
- yellow colored pus containing dead bacteria
  - Chocolate colored pus containing red blood cells and dead liver cells
  - extensive necrosis
  - Pus containing only E.histolytica cysts
  - granulation tissue
26. An athlete went to Olympics experienced a superficial infection in his foot. Multiple papules surrounded by clear area of normal skin were observed by him. His was diagnosed to have athletes foot. Which pathogen is responsible for his lesion?
- Sporothrix schenckii*
  - Tinea versicolor*
  - Tinea nigra*
  - Dermatophytes/ Ringworm*
  - Staphylococcus aureus*
27. 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*
28. 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:

Pathology

F-15-129

Arslan Asghar Amin

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- e. None of the above (a-c)
115. Hepatitis C virus belongs to which virus family?
- Paramyxoviridae
  - Caliciviridae
  - Picornaviridae
  - Bunyaviridae
  - Flaviviridae
116. Which of the following is true of Haemophilus influenzae?
- Invasive infections are most commonly associated with encapsulated strains
  - Most invasive infections occur in infants during the neonatal period
  - Most human infections are acquired from domestic pets
  - The organism can be readily cultured on sheep blood agar in an environment of elevated CO<sub>2</sub>
  - Older adults are rarely at risk for infection with this organism because they typically have a high level of immunity
117. For which of the following organisms is there no known animal reservoir?
- Yersinia pestis
  - Bordetella pertussis
  - Borrelia burgdorferi
  - Borrelia recurrentis
  - Brucella
118. Which of the following is true about Bordetella pertussis?
- It is strict aerobe
  - It is strict anaerobe
  - It can ferment sugars
  - It needs factors X and V for its growth
  - It is a common cause of pneumonia
119. Haemophilus influenzae colonize the upper respiratory tract and can spread from there to the meninges. What essential virulence factor, that aids meningeal spread, is produced by this organism?
- IgA protease
  - Endotoxin
  - Exotoxin
  - Thick peptidoglycan
  - Polysaccharide capsule
120. A 25-year-old presented with 5-day history of fever, malaise, and headache. He has three "Bull's eye" lesions on his thighs. Lesions are 10-15 cm in diameter, oval with somewhat irregular outlines, with 3-4 cm red borders and

Amin



- b) Block p53 activity
- c) Increased KRAS
- d) BRAF mutation
- e) C-Kit mutation

132. Which of the following are not characteristic of malignant neoplasm?

- a) They are polyclonal
- b) They can metastasize to distant sites
- c) They are monoclonal
- d) They are self-sufficient in growth signals
- e) They have increased angiogenesis

133. Genes that promote autonomous cell growth are in cancer cells are called?

- a) Proto-oncogenes
- b) Oncoproteins
- c) Oncogenes
- d) Mutated genes
- e) Growth factors

134. Chromosomal translocation t(9;22) relate to which of the following tumors?

- a) Burkitts lymphoma
- b) Chronic myelogenous leukemia
- c) Follicular lymphoma
- d) Melanoma
- e) Squamous cell carcinoma

135. Which of the following gene is known as guardian of genome?

- a) RB gene
- b) K- RAS
- c) BRAF
- d) P53
- e) C-MYC

136. A 60/M had a chest radiograph that reveals a right hilar mass. Biopsy of this mass revealed well differentiated squamous cell carcinoma. What is the most common initial pathway of spread of this tumor?

- a) Regional lymph nodes
- b) Bloodstream
- c) Pleural cavity

Which of the following is the most appropriate test for malaria?

Complete blood count

Ultrasound abdomen

Srurus hillinshin test

Microscopic examination of blood films <sup>Thin & Thick</sup>

c. Urine analysis

5. The route of entry of *E. histolytica* in human body is through

a. Penetration through skin

b. Inhalation of the cyst

c. Through body secretions

Faeco-oral route

c. Sexually transmitted

6. A 15 years old boy presented with high grade fever with chills. Malaria was diagnosed. However relapse occurred after initial treatment. The form of plasmodium responsible for relapse is

a. Merozoites

b. sporozoites

c. Hypnozoites

d. Gametocytes

e. Mature schizont

7. The sexual cycle of plasmodium

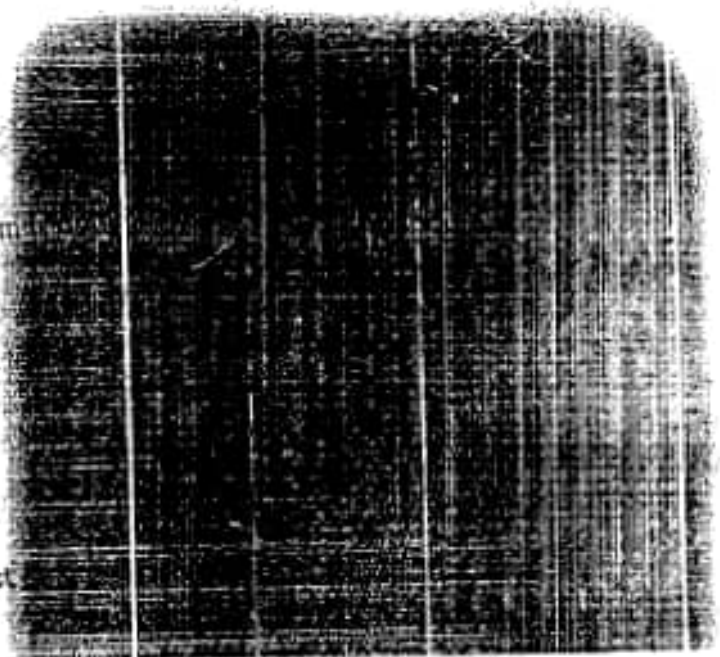
a. body of anopheline mosquito

b. liver cells of human

c. blood circulation

d. Human epidermal cells

e. Human gastrointestinal tract



51. A 30 years old female attended your clinic i.e. with the complaint of vaginal itching and malodorous discharge. You should include one of the following in your work up for the diagnosis.
- Ova and parasite fecal smear
  - Wet mount of vaginal fluid
  - Specific serologic test
  - Stool culture
  - None of the above
52. A patient was received in emergency department with complaints of low grade fever, chronic cough, night sweats and body aches. Mycobacterium tuberculosis was among the top differentials. Which media is used to culture this pathogen?
- Lofflers medium
  - Lowenstein-Jensen media LJ
  - Tellurite medium
  - Chocolate agar
  - Blood agar
53. After successful diagnosis and treatment of a patient of malignant tertian malaria you should tell your patient:
- There is little chance of relapse in 1-3 years
  - Hypersensitivity to the parasite may have developed
  - Due to possible resistance additional course of treatment is required
  - Patient must avoid mosquito bites as relapse of malaria may be induced
  - All of the above
54. Cysticercus cellulosae is found in:
- Cow
  - Pig ✓
  - Human ✓
  - Dog
  - 'B' and 'C' are correct
55. A known case of tuberculosis on ATT (anti-tuberculosis therapy), came to the outpatient department for follow up. His tuberculin skin test was positive. Tuberculin skin tests is a type of:
- Immediate hypersensitivity reaction
  - Type IV hypersensitivity reaction ✓
  - Type II hypersensitivity reaction
  - Type III hypersensitivity reaction

1. Proteus vulgaris
  2. Staphylococcus aureus
  3. Pseudomonas aeruginosa
  4. Campylobacter
  5. Yersinia pseudotuberculosis
91. A 32 year old man admitted in medical ward for foul smelling diarrhea containing blood developed symptoms of Guillian Barré syndrome after 48 hours. The most likely pathogen is:

1. Shigella
  2. Escherichia coli
  3. Campylobacter jejuni
  4. Helicobacter pylori
  5. Vibrio cholera
92. What is the basis of the noninvasive breath test used to diagnose H.pylori infection?

1. Catalase production
2. Coagulase production
3. Carbon dioxide production
4. Urease production
5. Hydrogen sulfide production

93. Definitive diagnosis of recent dengue virus infection is established by:

1. Decreased platelet count
2. Anti-dengue IgG antibodies
3. Anti-dengue IgM antibodies
4. Increased haematocrit (PCV)
5. Decreased MCV

94. The complication(s) of mumps especially in pre-pubertal age group is/are:

1. Orchitis — in post pubertal age
2. Otitis media
3. Oophoritis
4. Cervical lymphadenitis
5. Orchitis and oophoritis

95. Influenza is characterized by which of the following signs and symptoms?

1. Malaise and fever
2. Muscle pain and dry cough
3. Reyes syndrome
4. All of the above

fever, myalgias  
headache, sore throat, cough  
severe muscle pain.  
Reyes syndrome.  
if severe suddenly

- a. Increased hydrostatic pressure
- c. Endothelial damage
- d. Lymphatic obstruction
- e. Increased vascular permeability

80. Reduced plasma oncotic pressure is most important mechanism of edema in:

- a. Nephrotic syndrome
- b. Congestive heart failure
- c. Pedal edema due to deep vein thrombosis
- d. Edema due to lymphatic obstruction
- e. Brain hemorrhage

81. Turner's syndrome has:

- a. 45 chromosomes
- b. 47 chromosomes
- c. 44 chromosomes
- d. 48 chromosomes
- e. 49 chromosomes

82. 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

83. Following is not autosomal dominant disease:

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

84. Cytogenetics include following technique:

- a. CBC
- b. Serum electrolyte
- c. Spectrophotometry
- d. FISH
- e. C-reactive protein

85. Mitochondrial DNA is always inherited from:

8. Name the non-invasive test for the diagnosis of *Helicobacter pylori*
- ELISA
  - ammonia breath test
  - Urease breath test
  - Culture & Sensitivity
  - Biopsy
9. Which of the following statement regarding the biochemical test for *Klebsiella* is incorrect?
- E. coli* is Indole positive
  - E. coli* is motile
  - Klebsiella* is citrate positive
  - Klebsiella* is motile & Indole positive
  - Klebsiella* is urease positive
10. Triple sugar iron agar (TSI) showing an alkaline slant/alkaline butt (Red/Red) appearance. Which is the most likely causative agent?
- Salmonella*
  - Shigella*
  - Pseudomonas*
  - Proteus*
  - E. coli*
11. A 7-year-old girl was well until about 3 weeks ago, when she began complaining of being "tired all the time." On exam, her temperature is 38°C and there is tenderness below the right knee. Hemoglobin: 10.2; WBC: 9600 with increased neutrophils. A sickle cell preparation shows a moderate sickling tendency. Gram-negative, non-lactose fermenting rods grew in the blood culture. Name the causative agent:
- Micrococcus*
  - Escherichia*
  - Pseudomonas*
  - Salmonella*
  - Streptococcus*
12. A 20-year-old man has a swollen, red, hot, tender ankle, accompanied by a temperature of 106°F for the past 2 days. There is no history of trauma. Gram-negative diplococci in joint fluid aspirate seen. Organism is oxidase-positive. Which of the following is the causative agent?
- Staphylococcus aureus*
  - Enterococcus*
  - Streptococcus pyogenes*
  - Neisseria gonorrhoeae*
  - Streptococcus epidermidis*

102. Carcinogenic agents which can induce tumors in initiated cells, but they are non tumorigenic by themselves are known as:
- Initiators
  - Preneoplastic clones
  - Polyclonal
  - Promoters
  - Binding agents
103. Which of the following carcinogenic agents are used as cancer chemotherapeutic drugs?
- Benzol
  - Dibenz
  - Naphthylamine
  - Alkylating agents
  - Nitrosamine
104. Chromosomal translocation t(8;14) relate to which of the following tumors?
- Burkitts lymphoma
  - Ewing sarcoma
  - Follicular lymphoma
  - Squamous cell carcinoma
  - Melanoma
105. In which of the following syndrome there are increased chances of skin cancers?
- MEN syndrome
  - Carney's syndrome
  - Xeroderma pigmentosa
  - FAP syndrome
  - Marfan syndrome
106. The cell involved in the first line of defense against viral infection is:
- B-cell
  - T-cell
  - N-K cell
  - Macrophages
  - Dendritic cell
107. A complement component which is strongly chemotactic for neutrophils is:
- C3
  - C3b
  - C5b
  - C9
  - C5a
108. Which cell type produces antibodies?
- A Macrophages

18



# Azra Naheed Medical College

Annual Examination

MBBS 3<sup>rd</sup> Year (2<sup>nd</sup> Entry)

(Pathology-Objective Part)

Time Allowed: 1 hour

Total Marks: 50

Roll No:

### Instructions:

- 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.
- 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.

- Which of the following are not characteristic of malignant neoplasm?
  - They can metastasize to distant sites
  - They are monoclonal
  - They are polyclonal
  - They are self-sufficient in growth signals
  - They have increased angiogenesis
- Genes that promote autonomous cell growth in cancer cells are called?
  - Oncogenes
  - Proto-oncogenes
  - Oncoproteins
  - Mutated genes
  - Growth factors
- Hematogenous spread is the preferential pathway of metastasis of which of the following tumors?
  - Lymphoma
  - Sarcoma
  - Carcinoma
  - Teratoma
  - Melanoma
- Hypercalcemia is considered to be paraneoplastic syndrome of which of the following tumor?
  - Ovarian carcinoma
  - Pancreatic carcinoma
  - Squamous cell carcinoma of lung
  - Hepatocellular carcinoma
  - Basal cell carcinoma



5. Only 'A' and 'B' are correct
96. Which of the following is not a property of Rhabdoviruses?
1. They are enveloped viruses of the size of 75nm x 180nm
  2. Their composition is RNA (4%), protein (67%), lipid (26%) and carbohydrate (1%)
  3. Their genomes are ssRNA, linear, non-segmented and negative sense
  4. Their replication is very specific and it occurs in nucleus
  5. Coyotes are highly susceptible to them
97. Which of the following is not a complication of measles?
1. Otitis media
  2. Giant cell pneumonia
  3. Acute encephalitis
  4. SSPE
  5. Post-auricular lymphadenopathy
98. Fetal malformations occur in which percentage if rubella is acquired during first trimester of pregnancy?
1. 85%
  2. 75%
  3. 65%
  4. 55%
  5. 50%
99. Which form of polio vaccine(s) can produce best results?
1. Live attenuated vaccine
  2. Killed virus vaccine
  3. Subunit vaccine
  4. Conjugated vaccine
  5. Killed and live attenuated vaccines given together
100. Mortality rate in Ebola virus disease can be as high as:
1. 40%
  2. 50%
  3. 60%
  4. 70%
  5. 90%
101. The extent to which neoplastic cells resemble their normal counterparts both morphologically and functionally is known as?
- a. Differentiation
  - b. Anaplasia
  - c. Neoplasia
  - d. Dysplasia
  - e. Metaplasia

- c. *Clostridium perfringens*
- d. *Listeria monocytogenes*
- e. *Enterococcus faecalis*

Muscle contraction

47. A patient presented to emergency department with spastic paralysis and locked jaw. He had history of road traffic accident a few days back. Laboratory results revealed Gram positive spore forming anaerobes. What is the mechanism of action of this organism?

- a. Inhibition of Acetylcholine
- b. Formation of Protective antigen
- c. Inhibition of Glycine and GABA →
- d. Stimulation of Proteins
- e. Activation of acetylcholine esterase

48. A young married women was recolved in gynaecology department with history of increased amount of thin, grey-white, fishy vaginal discharge for the last few days. Gram staining revealed clue cells. Whiff test was also positive. Which one of the following is the most likely causative agent?

- a. *Candida albicans*
- b. *Trichomonas vaginalis*
- c. *Gardnerella vaginalis* →
- d. *Lactobacilli*
- e. *Gonococci*

49. A shephard presented to the dermatology department with painless ulcer with black eschar on his hand. He had history of trauma a few days back. Which of the following Gram positive rod, also used for bio-terrorism is the most likely causative agent?

- a. *Bacillus anthracis*
- b. *Clostridium tetani*
- c. *Bacillus cereus*
- d. *Clostridium perfringens*
- e. *Corynebacterium diphtheria*

50. A pre-mature baby boy developed meningitis one week after birth. Mother had history of ingestion of unpasteurized milk and cheese. Gram staining of CSF revealed L-shaped Gram positive rods having tumbling motility. What is the most likely causative agent?

- a. *Neisseria meningitidis*
- b. *Streptococcus pneumoniae*
- c. *Listeria monocytogenes*
- d. *Streptococcus agalactiae*
- e. *E. coli*

45. If the following features of the acute inflammatory reaction were placed in chronological order which would come fourth?
- Arteriolar contraction
  - Blood flow slows
  - Dilatation of arterioles
  - Emigration of leucocytes from blood vessels
  - Protein-rich fluid escapes from blood vessels
46. Which one of the following ultrastructural features is believed to allow for the increased permeability of the vascular endothelium in acutely inflamed tissue?
- Cytoplasmic pinocytotic vesicles
  - Gaps in endothelial tight junctions
  - Gaps in basement membrane
  - Increase in number of phagolysosomes
  - No morphological changes
47. Which of the following will impair wound healing
- Deficiency of Vit-C
  - Excess of glucocorticoids
  - Tissue hypoxia
  - Poor vascular supply
- All of the above
48. Which of the following substance is produced by action of lipo-oxygenase on arachidonic acid is a potent chemotactic for neutrophils and cause aggregation and adhesion of leukocytes
- C5a
  - Prostacyclin
  - IL-8
  - Thromboxane A<sub>2</sub>
  - LTB<sub>4</sub>
49. An 18 year old man lacerated his left hand and required sutures. The sutures were removed one week later. Wound healing continued but the site became disfigured by a prominent raised scar that developed over the next two months. Which of the following terms best describes the process that occurred during this two months period.
- Keloid formation
  - Organization
  - Dehiscence
  - Resolution
  - Secondary union.
50. In cleaning of the clean wound maximum immediate strength of the wound is reached by:
- 2-3 days
  - 4-7 days
  - 10-12 days
  - 13-18 days
  - 6 months

13

1. Which of the following best describes the effect of propylthiouracil on thyroid hormone production?
- A. It blocks the release of thyrotropin-releasing hormone.
  - B. It inhibits uptake of iodide by thyroid cells.
  - C. It prevents the release of thyroid hormone from thyroglobulin.
  - D. It blocks iodination and coupling of tyrosines in thyroglobulin to form thyroid hormones.
  - E. It blocks the release of hormones from the thyroid gland.

2. A 64-year-old woman with a history of Type 2 diabetes is diagnosed with heart failure. Which of the following drugs would be a poor choice in controlling her diabetes?

- A. Sitagliptin.
- B. Exenatide.
- C. Glyburide.
- D. Glipizide.
- E. Pioglitazone.

3. Which of the following statements is true for therapy with insulin glargine?

- A. It is primarily used to control prandial hyperglycemia.
- B. It should not be combined with any other insulin.
- C. It is now used preferentially in Type 1 diabetics who are pregnant.
- D. Pharmacokinetically, there is no peak activity, and the activity lasts about 24 hours.
- E. It is effective by inhalation.

4. A child with asthma is being treated effectively with an inhaled preparation of beclomethasone dipropionate. Which of the following adverse effects is of particular concern?

- A. Hypoglycemia.
- B. Hirsutism.
- C. Growth suppression.
- D. Cushing's syndrome.
- E. Cataract formation.

5. Which of the following drugs specifically inhibits calcineurin in the activated T lymphocytes?

- A. Daclizumab.
- B. Cyclosporine.
- C. Prednisone.
- D. Sirolimus.
- E. Mycophenolate mofetil.

6. A patient is being treated with allopurinol to control hyperuricemia resulting from chemotherapy. Which of the following would have to have its dose reduced to prevent toxicity?

- A. 5-FU.
- B. 6-MP.
- C. 6-TG.
- D. Fludarabine.
- E. Cytarabine.

7. Mucositis develops in a patient undergoing cancer chemotherapy with methotrexate. Administration of which one of the following agents would help?

- A. Leucovorin.
- B. Filgrastim.
- C. Prednisone.
- D. Vitamin B<sub>12</sub>.

8. Which of the following drugs is recommended for the treatment of severe, multidrug-resistant Plasmodium falciparum malaria?

- A. Artemisinin.
- B. Chloroquine.
- C. Quinine.
- D. Sodium stibogluconate.
- E. Primaquine.

C N  
N

1. Mast Cell
2. Eosinophil
3. Giant Cell ✓
4. Neutrophil
5. Plasma Cell

28. Woman 43-year had a chronic cough with fever & weight loss for past month. A chest radiograph reveals multiple nodules from 1 to 4 cm in size, along with cavitations 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 her lung lesions?

1. Macrophage
2. Fibroblast
3. Neutrophil
4. Mast Cell
5. Platelet

29. An inflammatory process that has continued for 3 months includes the transformation of tissue macrophages to epithelioid cells. There are also lymphocytes present. Over time, fibroblasts lay down collagen as the focus of inflammation heals. These events are most likely to occur as an inflammatory response to which of the following infectious agents?

1. *Mycobacterium tuberculosis*
2. *Pseudomonas aeruginosa*
3. Cytomegalovirus
4. *Giardia lamblia*
5. HIV

30. The most potent vasodilator in body is

1. Bradykinin
2. Nitric oxide & neutrophils
3. Nitric oxide & histamine
4. Histamine
5. TNF- $\alpha$

31. Chemotaxis is the process in which:

- a. There is phagocytosis of foreign material.
- b. Exudation of fluid occurs.
1. Leukocytes are attracted to & move towards the sites of injury.

14



**Department of Pathology  
Azra Naheed Medical College  
Half book Test, 25 August 2017  
MBBS 3<sup>rd</sup> Year (MCQ)  
(Microbiology)**

**Time Allowed: 30 min**

**Total Marks: 30**

**Name:** \_\_\_\_\_

**Roll No:** \_\_\_\_\_

**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. Bacterial pili may enhance virulence of bacterial pathogens by:
  - a. Transporting nutrients
  - b. Providing a means of attachment
  - c. Increasing the surface area of bacteria.
  - d. Being an endotoxin
  - e. By acting as an exotoxin
2. Which of the following phases of growth curve would most likely be missing detectable growth, but having vigorous metabolic activity?
  - a. Lag phase
  - b. Log phase
  - c. Stationary phase
  - d. Death phase
  - e. Decline phase
3. The ability to use compounds and ions other than oxygen as terminal oxidants in respiration is a widespread trait used by facultative bacteria to grow in the absence of oxygen. This capacity is called as:
  - a. Photosynthesis
  - b. Fermentation
  - c. Anaerobic respiration
  - d. Substrate phosphorylation
  - e. Nitrogen fixation

- b. Enveloped viruses only
- c. Some naked and some enveloped viruses
- d. Both 'A' and 'B' are correct
- e. Both 'B' and 'C' are correct

74. Continuous cell lines for virus culture are derived from:

- a. HeLa cells
- b. Cervical cancer cells
- c. Human amnion cells
- d. Both 'A' and 'B' are correct
- e. Both 'B' and 'C' are correct

75. Size of the largest virus particle is:

- a. 100 nm
- b. 200 nm
- c. 300 nm
- d. 400 nm
- e. 500 nm

76. Which of the following convert plasma protein fibrinogen into the insoluble fibrous protein fibrin?

- a. Thrombin
- b. Prothombin
- c. Fibrinogen
- d. Fibrinonectin
- e. Epinephrine

77. Endothelial injury, stasis or turbulence of blood flow and blood hypercoagulability form so called:

- a. Coagulation cascade
- b. Extrinsic pathway
- c. Intrinsic pathway
- d. Virchows triad
- e. Plasminogen plasma system

78. If the blood supply of an organ is compromised, minimum how much is required to show demonstrable Histologic findings?

- a. 0-60 sec
- b. 2-4 hrs
- c. 4-12 hrs
- d. 12-24 hrs
- e. 24-36 hrs

79. Which of the following is mechanism of edema in patients with congestive heart failure?

- a. Decreased plasma oncotic pressure

d) Inheritance of defects in DNA repair genes that increase the susceptibility to develop cancer

e) Overexpression of growth factor receptor genes

Q. 4 Which one of the genes is Governor of the cell cycle

a) p53 → Cancer

b) p16

c) Rb gene

d) C-myc

e) RAS gene → oncogene

Q. 5 An epidemiologic study is performed to assess risks for cervical carcinoma. The cells from cervical lesions in a population of women are analyzed. Binding of certain viral proteins to pRB is found in patients in whom dysplastic cells are present. Viral proteins from which of the following are most likely to bind pRB, increasing the risk for dysplasia?

a) Cytomegalovirus

b) Epstein-Barr virus

c) Herpes simplex virus

d) HIV

e) Human papillomavirus

Q6 - TEST 7  
B7 - Rb → pRB

Q. 6 During a routine health maintenance examination of a 40 year old man, a stool guaiac test result was positive. A follow-up sigmoidoscopy showed a 1.5-cm, circumscribed, pedunculated mass on a short stalk, located in the upper rectum. Which of the following terms best describes this lesion?

a) Adenoma

b) Hamartoma

c) Sarcoma

d) Choristoma

e) Nevus

Q. 7 A 40 year old man notices an increasing number of lumps in the groin and armpit. On physical examination, he has generalized nontender lymph node enlargement and hepatosplenomegaly. An inguinal lymph node biopsy specimen shows a malignant tumor of lymphoid cells. Immunoperoxidase staining of the tumor cells with antibody to BCL2 is positive in the lymphocytic cell nuclei. Which of the following mechanisms has most likely produced the lymphoma?

a) Increased tyrosine kinase activity



9 + 41  
JK

# Parasitology

2017

30/7/17

Parasites

total marks: 12

## MCCQs

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

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

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

- a.  Plasmodium falciparum
- b. Hookworm infection
- c. Plasmodium ovale
- d.  plasmodium malarian
- e. Giardia lamblia

3. Abdominal ultrasound of a patient with amoebiasis was performed and examination showed amoebic trophozoites in the pus of the liver abscess caused by amoebiasis.

- a. yellow colored pus containing
- b.  Chocolate colored pus
- c.  Extensive necrosis
- d. Pus containing only E
- e. granulation tissue

e) All of the above

152. Oral hairy leukoplakia is a wart like growth that develops on the tongue in some HIV infected persons and transplant patients. Which one of the following viruses is the most probable cause of this disease condition?

- a) Epstein Barr virus
- b) Human Herpes virus 6
- c) Human Herpes virus 7
- d) Human Herpes virus 8
- e) Human immunodeficiency virus

153. Among patients of EBV infection which of the following statement is correct?

- a) The presence of IgM is indicative of current infection
- b) The presence of IgG is indicative of past infection
- c) Antibodies to EBNA antigens reveal past infection with EBV
- d) All of the above (a-c)
- e) Only a & b are correct

154. A previously healthy 4 year girl develops classic viral childhood illness. Which of the following primary viral infection of childhood is usually symptomatic?

- a) Hepatitis B virus
- b) Cytomegalovirus
- c) Varicella zoster virus
- d) Epstein Barr virus
- e) All of the above

155. HIV-1 encodes an envelop glycoprotein, gp120. This protein:

- a) Is highly conserved among different isolates
- b) Falls to elicit neutralizing antibodies
- c) Induces chemokine production
- d) Causes membrane fusion
- e) None of the above

156. In WNT signaling pathway, role of APC is to regulate the stability & function of which of the following gene?

- a) NF1
- b) NF2
- c) E-Cadherin
- d) Beta-catenin
- e) PTEN

V

- A. Metronidazole.  
B. Pentamidine.  
E. Stibogluconate.

B. Quinidine.  
D. Sulfadoxine.

18. Hydration and/or diuresis can prevent the renal toxicity associated with:  
 A. Cisplatin  
B. Chlorambucil.  
C. Tamoxifen.  
D. Gemcitabine.

19. Which of the following drugs used to prevent allograft rejection can cause hyperlipidemia?

- C. Tacrolimus.  
B. Basiliximab.  
D. Mycophenolate mofetil.

20. Dexrazoxane is protective against cardiotoxicity caused by:

- A. methylprednisolone.  
C. Topotecan  
 B. Anthracyclines  
D. sirolimus

21. The plant derived anti cancer agents that act in M phase of cell cycle and arrest polymerization of tubulin are:

- A. Anthracyclines  
C. Camptothecins  
 B. Vinca alkaloids  
D. Epipodophylotoxins

22. Administration of acid reducing drugs like omeprazole may result in reduced absorption of:

- A. Iron  
B. Vit B12  
C. Vit B6  
D. Mg

23. The acid suppressing drugs which are used in peptic ulcer disease and in eradication regimen for H. Pylori are:

- A. Antacids  
 B. PPIs  
C. H2 blockers  
D. Antimuscarinic

24. Which of the following drugs is contraindicated in patients with glaucoma?

- A. Estrogens  
B. FSH and LH  
 C. Glucocorticoids  
D. Insulin

25. Oral contraceptives are not used for

- A. Menstrual regulation  
Dysmenorrhea  
 B. Treatment of breast carcinoma  
C. Contraception  
D.

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

- b) Easily visible in the light microscope
- c) Grow well in bacteriological culture media
- d) Divide by nuclear division inside the host cell
- e) Obligate intracellular bacteria

142. Which of the following organisms is transmitted directly from human-to-human?

- a) Coxiella burnetii
- b) Rickettsia prowazekii
- c) Rickettsia tsutsugamushi
- d) Rickettsia rickettsii
- e) Rickettsia typhi

143. Rocky mountain spotted fever is caused by:

- a) Coxiella burnetii
- b) Rickettsia prowazekii
- c) Rickettsia tsutsugamushi
- d) Rickettsia rickettsii
- e) Rickettsia typhi
- f)

144. Trachoma is caused by:

- a) Chlamydia trachomatis immunotypes A-C
- b) Chlamydia trachomatis immunotypes T-R
- c) Chlamydia trachomatis immunotypes A-L
- d) Chlamydia trachomatis immunotypes L1-L3
- e) Chlamydia trachomatis immunotypes D-K

145. Chlamydia trachomatis is associated with the following except:

- a) Endemic trachoma
- b) Inclusion conjunctivitis
- c) Lymphogranuloma venereum
- d) Community acquired pneumonia
- e) Nongonococcal urethritis

146. Smallest free living organisms are:

- a) Mycoplasmas
- b) Viruses
- c) Chlamydia
- d) Rickettsia
- e) Coxiella burnetii

9. A 36-year-old male of Lebanese ancestry is being treated for Plasmodium vivax malaria. He experiences severe fatigue, back pain, and darkened urine. Which one of the following antimalarial drugs is most likely to have caused his symptoms?

- A. Pyrimethamine.
- B. Artemisinin.
- C. Chloroquine.
- D. Quinine.
- E. Primaquine.

10. Hyperthyroidism can be treated by all but which one of the following?

- A. Thyrotoxic periodic paralysis.
- B. Surgical removal of the thyroid gland.
- C. Propylthiouracil.
- D. Propranolol.
- E. Radioiodine.

11. Which of the following hormones is a non-peptide, allowing oral administration?

- A. Growth hormone.
- B. Growth hormone releasing hormone.
- C. Growth hormone releasing hormone inhibitor.
- D. Thyroxine.
- E. Thyrotropin-releasing hormone.

12. The ability to reduce insulin resistance is associated with which one of the following classes of hypoglycemic agents?

- A. Meglitinides.
- B. Sulfonylureas.
- C. Glucosidase inhibitors.
- D. Thiazolidinediones.
- E. Gastrointestinal hormones.

13. Estrogen replacement therapy in menopausal women:

- A. Restores bone loss accompanying osteoporosis.
- B. May induce hot flashes.
- C. May cause atrophic vaginitis.
- D. Is most effective if instituted at the first signs of menopause.
- E. Requires higher doses of estrogen than with oral contraceptive therapy.

14. A 23-year-old woman has failed to become pregnant after 2 years of unprotected intercourse. Which of the following would be effective in treating infertility due to anovulatory cycles?

- A. A combination of an estrogen and progestin.
- B. Estrogen alone.
- C. Progesterone alone.
- D. Raloxifene.
- E. Testosterone.

15. Young athletes who abuse androgens should be made aware of the side effects of these drugs. Which one of the following is, however, not of concern?

- A. Increased muscle mass.
- B. Anemia due to bone marrow failure.
- C. Overly aggressive behavior.
- D. Decreased spermatogenesis.
- E. Stunted growth.

16. Osteoporosis is a major adverse effect caused by the glucocorticoids. It is due to their ability to:

- A. Increase the excretion of calcium.
- B. Inhibit absorption of calcium.
- C. Stimulate the HPA axis.
- D. Decrease production of prostaglandins.
- E. Increase production of prostaglandins.

17. A 22-year-old man, who frequently backpacks, complains of diarrhea and fatigue. Examination of stool specimens shows binucleate organisms with four flagellae. Which one of the following drugs would be effective in treating this patient's infestation?

126. In malignant tumors nuclear: cytoplasmic ratio is disturbed & becomes?
- 1:4
  - 1:6
  - 1:1
  - 15:1
  - 8:1
127. A 70 years male presented with haematuria & underwent for cystoscopic examination, which revealed a polypoidal growth in bladder. The biopsy of this mass revealed highly undifferentiated tumor with bizarre looking cells & atypical mitosis. Which of the following term will describe this morphology?
- Dysplasia
  - Neoplasia
  - Sarcoma
  - Schirous
  - Anaplasia
128. The net effect of Human Papilloma Virus Proteins (E6 & E7) is to block apoptosis by which of the following mechanism?
- Enhance p53 activity
  - Block p53 activity
  - Increased KRAS
  - BRAF mutation
  - C-Kit mutation
129. Which of the following are not characteristic of neoplasm?
- They are polyclonal
  - They can metastize to distant sites
  - They are monoclonal
  - They are self-sufficient in growth signals
  - They have increased angiogenesis
130. In malignant tumors neoplastic ~~parenchymal cells stimulate the formation of abundant collagen stroma~~. Which of the following term is used to explain this phenomenon?
- Neoplasia
  - Desmoplasia
  - Anaplasia
  - Hyperchromasia
  - Aplasia
131. The net effect of HPV proteins (human papilloma virus) E6 & E7 is to block apoptosis by which of the following mechanism.
- Enhance p53 activity

- d) Contiguous spread to chest wall
- e) Bronchi

137. Hematogenous spread is the preferential pathway of metastasis of which of the following tumors?

- a) Lymphoma
- b) Carcinoma
- c) Teratoma
- d) Sarcoma
- e) Melanoma

138. A 42-year-old woman who has had multiple sexual partners for the past 30 years has an abnormal Pap smear with cytologic changes suggesting human papillomavirus infection. She is most likely to develop which of the following lesions?

- a) Squamous cell carcinoma
- b) Endometrioid carcinoma
- c) Kaposi's sarcoma
- d) Adenocarcinoma
- e) Leiomyoma

139. A 70/M presented with haematuria & underwent for cystoscopic examination, which revealed a polypoidal growth in bladder. The biopsy of this mass revealed highly undifferentiated tumor with bizarre looking cells & atypical mitosis. Which of the following term will describe this morphology?

- a) Dysplasia
- b) Neoplasia
- c) Sarcoma
- d) Schirrous
- e) Anaplasia

140. Which of the following statement is correct about sentinel lymph node?

- a) Last lymph node in the regional lymphatic basin of a primary tumor
- b) 3<sup>rd</sup> lymph node in the regional lymphatic basin of a primary tumor
- c) 1<sup>st</sup> lymph node in the regional lymphatic basin of a primary tumor
- d) 2<sup>nd</sup> lymph node in the regional lymphatic basin of a primary tumor
- e) lymph node in the regional lymphatic basin of a primary tumor

141. Which of the following is true of Rickettsia?

- a) Very short Gram-negative rods that stain well with the standard Gram stain



2-4 cm central red areas, separated by a belt of paler skin. Which diagnosis is most likely?

1. Staphylococcal scalded skin syndrome
2. Primary syphilis
3. Secondary syphilis
4. Lyme disease (Erythema migrans)
5. Relapsing fever

121. Which of the following media is used for isolation of *Bordetella pertussis*?

1. Blood agar
2. Chocolate agar
3. Bordet-Gengou medium
4. Thayer-Martin medium
5. Sheep blood agar

122. An elderly man with chronic heart and lung disease develops *Legionella* pneumonia. By what route was the infection most likely to have been acquired?

1. Respiratory route, from an infected person
2. Inhalation of spores from air
3. Exposure to livestock or animal products
4. Inhalation of aerosolized water from a source containing the bacteria
5. Inhalation of bacteria from birds' droppings

123. Legionnaires disease:

1. Is easily transmitted from person-to-person
2. Diagnosis is usually confirmed by serological tests
3. The causative organism cannot be grown on bacteriological culture media
4. Is treated with a combination of gentamicin and penicillin
5. Typically present as lobar pneumonia

124. Which of the following diseases is very common in sewer workers?

1. Anthrax
2. Dengue
3. AIDS
4. Relapsing fever
5. Leptospirosis

125. Which of the following is the characteristic feature of *Mycoplasma*?

1. *Mycoplasma* contains peptidoglycans
2. *Mycoplasma* contains both DNA and RNA
3. Host cell DNA is necessary for its replication
4. Penicillins are effective against it
5. Cephalosporins are the drug of choice for treatment of infections caused by *Mycoplasma pneumoniae*

- b. T-lymphocytes
  - c. NK
  - d. Plasma cells
  - e. Eosinophils
109. Toll like receptors are present in:
- a. Cell wall
  - b. Plasma membrane
  - c. Cytosol
  - d. nucleus
  - e. endoplasmic reticulum
110. The first line of defense against microbes is:
- a. innate immunity
  - b. adaptive immunity
  - c. humoral immunity
  - d. cell mediated immunity
  - e. hypersensitivity
111. Acute gingivostomatitis is caused by which one of the following viruses?
- a. Cytomegalovirus
  - b. Respiratory syncytial virus
  - c. Herpes simplex type-1 virus
  - d. All of the above (a-c)
  - e. Only b and c are correct
112. The presence of Hepatitis B antigen means your patient is:
- a. Non immune to infection with HBV
  - b. Infected with hepatitis B virus
  - c. HBV is replicating in the body at low rate
  - d. All (a-c) are correct
  - e. Only b and c are correct
113. Hepatitis A virus belongs to with virus family:
- a. Flaviviridae
  - b. Picornaviridae
  - c. Enteroviridae
  - d. Calciviridae
  - e. Paramyxoviridae
114. Which of the following DNA Viruses contain a virion associated DNA polymerase?
- a. Hepatitis B virus
  - b. Adenovirus
  - c. Herpes simplex virus type-1
  - d. All of the above (a-c)

147. A 12 year old patient presents to pediatric OPD with history of hacking cough for three weeks. He has already taken a course of ampicillin without any improvement of his cough. X-Ray chest reveals interstitial pneumonia with patchy infiltration. The physician labels him as a case of "primary atypical pneumonia". What is the most probable organism responsible for this illness?
- Hemophilus influenza
  - Coxiella burnetii
  - Chlamydia pneumonia
  - Mycoplasma Pneumoniae
  - Chlamydia psittaci
148. A distinguishing feature of human Mycoplasma species is that they:
- Stain well with Gram stain
  - Contain no bacterial peptidoglycan
  - Are not immunogenic because they mimic host cell membrane components
  - Cannot be cultivated in vitro
  - Are dependent on host sources of ATP
149. A 25 years milkman presented to the emergency department with complaints of high grade fever, headache, severe backache and myalgia and night sweats. The patient told that fever peaks in the evening and slowly returns to normal by morning. A blood culture revealed growth of small gram negative rods after several days. Which of the following bacteria is the most likely pathogen?
- Hemophilus influenza
  - Coxiella burnetii
  - Chlamydia pneumonia
  - Brucella species
  - Mycoplasma Pneumoniae
150. The most pathogenic Brucella spp. for man is:
- Brucella melitensis
  - Brucella suis
  - Brucella abortus
  - Brucella canis
  - Brucella species
151. A newer virus first detected in 1994 has genomic size of about 165 Kbp. This virus is said to be the cause of Kaposi's sarcoma and body cavity lymphomas. Identify this virus.
- Epstein Barr virus
  - Human Herpes virus 6
  - Human Herpes virus 7
  - Human Herpes virus 8

67. Black water fever is a special manifestation of malaria caused by
- P. falciparum
  - P. malariae
  - P. ovale
  - P. vivax
  - P. knowlesi
68. A 35 yrs old male presents in emergency with c/o high grade fever and right upper quadrant pain. He gives h/o passing bloody stools 14 days back. O/E there is tenderness in the right upper quadrant. The most likely cause of infection is:
- Giardia lamblia
  - Vibrio cholera
  - Entamoeba histolytica →
  - Cryptosporidium
  - None of above
69. A 35 yrs old Indian comes to OPD with c/o intermittent fever, weight loss, petechial hemorrhages and hyperpigmentation of the skin. He also has hepatomegaly & massive splenomegaly. The most likely cause of infection is:
- Leishmania tropica
  - Leishmania Mexicana
  - Leishmania donovani
  - Leishmania major
  - Leishmania braziliensis
70. Parasitized red cells are enlarged in:
- P. vivax
  - P. ovale
  - P. malariae
  - P. falciparum
- 'A' and 'B' both are correct
71. Essential structural components of a nature virion are:
- Nucleic acid, capsid and envelope
  - Nucleic acid, capsid, envelope and matrix protein
  - Nucleic acid, capsid, envelope and DNA polymerase
  - Nucleic acid and capsid
  - Genome, capsid and envelope
72. Viral genome can be:
- dsDNA or dsRNA
  - dsDNA and ssRNA
  - ssDNA and dsRNA
  - ssDNA and ssRNA
  - All of the above ✓
73. Chloroform and ether can inactivate which of the following virus particles?
- Naked viruses only

- c. Enterococcus  
 (d) E. coli  
 e. Pseudomonas
61. Which of the following produces swarming growth characteristically over blood agar plate?  
 a. Klebsiella  
 (b) Proteus  
 c. Salmonella  
 d. Shigella  
 e. Enterobacter
62. Which of the following bacteria causes the most severe form of bacillary dysentery?  
 a. Salmonella typhi  
 b. Shigella flexneri  
 c. Shigella boydii  
 d. Shigella sonnei  
 (e) Shigella dysenteriae →
63. Widal test is used to detect:  
 a. Antigens of Salmonella  
 b. Antibodies against salmonella  
 (c) Rise in antibody titer in patient's serum against salmonella  
 d. Flagellar antigens of Salmonella  
 e. Somatic antigens of Salmonella
64. Crescentic gametocytes are observed in:  
 a. P. vivax  
 b. P. ovale  
 c. P. malariae  
 (d) P. falciparum →  
 e. 'A' and 'B' both are correct
65. Which of the following pathogens is the commonest cause of traveler's diarrhea?  
 a. Enterohemorrhagic E. coli (EHEC)  
 b. O157:H7 strains of E. coli  
 c. Enteroinvasive E. coli  
 (d) Enterotoxigenic E. coli  
 e. Shiga toxin producing E. coli
66. Each of the following parasites is transmitted by mosquitoes EXCEPT:  
 a. Plasmodium falciparum  
 (b) Leishmania Donovanii  
 c. Plasmodium vivax  
 d. Wuchereria bancrofti  
 e. Dengue virus

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~~IV~~

42. An eight year old boy developed Influenza like signs & symptoms with production of rusty sputum. He was suspected to have pneumonia. Sputum sample was cultured revealing  $\alpha$ -hemolytic Gram positive cocci, giving optochin sensitivity. Most likely organism will be?
- a. *Streptococcus pneumoniae*
  - b. *Enterococci*
  - c. *Staphylococcus aureus*
  - d. *Streptococcus agalatae*
  - e. *Streptococcus pyogenes*
43. After extraction of wisdom tooth, a 20 year old male student was diagnosed as a case of sub-acute bacterial endocarditis. Laboratory tests revealed  $\alpha$ -hemolytic Gram positive cocci. Mark the causative organism.
- a. *Staphylococcus aureus*
  - b. *Staphylococcus epidermidis*
  - c. *Streptococcus pneumoniae*
  - d. *Streptococcus viridians*
  - e. *Enterococcus faecalis*
44. While walking in a garden, a labourer had a deep prick on the right foot. The condition of his wound aggravated and it refused to heal. Two weeks later he visited a physician who diagnosed the wound as a malignant pustule. This lesion is caused by:
- a. *Bacillus stearothermophilus*
  - b. *Bacillus anthracis* *serious*
  - c. *Corynebacterium diphtheriae*
  - d. *Clostridium perfringens*
  - e. *Clostridium tetani*
45. Aschoffs nodules are caused by:
- a. Methicillin resistant *Staph. aureus*
  - b. Hyaluronidase producing *Staphylococci*
  - c. Group A,  $\beta$ -hemolytic *Streptococci*
  - d. *Pseudomonas aeruginosa*
  - e. None of the above
46. A young girl developed vomiting & nausea 3-4 hours after ingestion of reheated-fried rice. On Gram staining Gram positive rods were identified. Which of the following is the most likely causative agent?
- a. *Staphylococcus aureus*
  - b. *Bacillus cereus*

*then*

12. The predominant anaerobic bacterial flora present in feces is :

- a. *E.coli*
- b. *Clostridium*
- c. *Coliforms*
- d. *Enterococcus*
- e. *Bacterioides fragilis*

13. Chocolate agar is an example of enriched medium used for culturing of:

- a. Bacteria that grow on simple media
- b. Fastidious bacteria
- c. Non fastidious bacteria
- d. Wall less bacteria
- e. Obligate intracellular parasites

14. Which of the following bacteria has flexible thin cell wall?

- a. *Treponema*
- b. *Bordetella*
- c. *Legionella*
- d. *Histoplasma*
- e. *Brucella*

15. Bacterial pili may enhance virulence of bacterial pathogens by:

- a. Transporting nutrients
- b. Providing a means of attachment
- c. Increasing the surface area of bacteria.
- d. Being an endotoxin
- e. By acting as an exotoxin

16. Which of the following is not a characteristic of bacterial capsules?

- a. Antigenic
- b. Polysaccharide in nature
- c. Has an endotoxin like action ✓
- d. Can be used in identification of bacteria ✓
- e. Anti-phagocytic

17. Typical stages of an infectious disease are?

- a. Prodrome period, specific-illness period, incubation period and convalescence period
- b. Prodrome period, incubation period, specific-illness period and convalescence period
- c. Prodrome period, specific-illness period, convalescence period and incubation period

- d. 180°C for 2 hours
- e. 100°C for 2 hours

7. Which of the following organism is a facultative anaerobe?

- a. *Clostridium species*
- b. *Staphylococci*
- c. *Pseudomonas*
- d. *Mycobacterium tuberculosis*
- e. *Bacteroides*

8. Which of the following statements is not true regarding transposons?

- a. Also known as jumping genes
- b. Can jump within the chromosome
- c. Can jump from chromosomes to plasmids
- d. Can replicate independent of chromosomal replication
- e. Are nonessential component of bacterial genome

9. Which statement is correct regarding bacterial growth curve?

- a. The curve has lag - log - stationary and death phases in sequence
- b. The curve has lag - log - stationary and death phases in sequence
- c. Death rate is maximum during lag phase
- d. Growth rate is maximum in stationary phase
- e. Growth rate is minimum during stationary phase

10. With regard to antibiotics which one of the following statements is correct?

- a. Vancomycin and penicillins inhibit bacterial cell wall synthesis through the same mechanism:
- b. Cephalosporins and penicillins inhibit bacterial cell wall synthesis through the same mechanism
- c. Vancomycin is a protein synthesis inhibitor
- d. Metronidazole has similar mechanism of action as erythromycin
- e. Chloramphenicol is a cell wall synthesis inhibitor

11. Which of the following disinfectant cannot be used for skin?

- a. Hydrogen peroxide
- b. Iodophores
- c. 70-90% alcohol
- d. Chlorine ——— water supply swimming pool } cleaning.
- e. Tincture of iodine



Aslam  
Asghar

Pathology  
①

M-Amin  
F-15-129

1. Which of the following serological technique is based on clumping together of cells or particles as a result of antigen antibody reaction?
  - a. ELISA
  - b. ICT (Immunochromatography)
  - c. Complement fixation test
  - d. Precipitation test
  - e. Agglutination test
2. Which one of the following is not a property of exotoxin?
  - a. Lipo-polysaccharide in nature
  - b. Antigenic
  - c. Protein in nature
  - d. Produced by Gram positive bacteria.
  - e. Produced by Gram negative bacteria.
3. Which of the following disinfectants is most effective when its concentration is 70%?
  - a. Gluteraldehyde
  - b. Formaldehyde
  - c. Chlorine
  - d. Alcohol
  - e. Phenols
4. The most appropriate role of Gram's iodine in the Gram staining technique is:
  - a. Decolorization
  - b. Mordant and forms crystal violet iodine complex
  - c. Counter staining
  - d. Act as modarator
  - e. Act as primary stain
5. Which of the following is an example of selective media?
  - a. Chocolate agar
  - b. Lowenstains Jensen's medium
  - c. Blood agar
  - d. MacConkey agar
  - e. Nutrient agar
6. The correct temperature and time for sterilization by pasteurization is:
  - a. 121°C for 15 min
  - b. 62°C for 30 minutes
  - c. 26°C for 30 minutes

- d. *Actinomyces israelii*  
 e. *Bacteroides fragilis*
37. Which of the following organisms can cause food poisoning?
- a. *Staphylococcus aureus*  
 b. *Enterococcus*  
 c. Enterotoxigenic *E. coli*  
 d. Only 'A' and 'C' are correct  
 e. None of the above
38. Which of the following bacilli produce a toxin which inhibits elongation factor-II (EF-2). It virtually stops protein synthesis which results in necrosis?
- a. *Bacillus stearothermophilus*  
 b. *Bacillus anthracis*  
 c. *Corynebacterium diphtheriae*  
 d. *Clostridium perfringens*  
 e. *Clostridium tetani*
39. Which one of the following non-spore forming filamentous Gram positive rods are weakly acid fast on ZN staining?
- a. *Corynebacterium diphtheriae*  
 b. *Listeria monocytogenes*  
 c. *Actinomyces israelii*  
 d. *Nocardia asteroides*  
 e. *Gardnerella vaginalis*
40. Flaccid paralysis is caused by:
- a. *Clostridium difficile*  
 b. *Clostridium perfringens*  
 c. *Clostridium tetani*  
 d. *Clostridium botulinum*  
 e. 'C' and 'D' are correct
41. A 60 year old immunocompromised patient on renal dialysis complained of tenderness around the peritoneal catheter. On culturing the catheter tip, Gram positive, catalase positive, coagulase negative cocci were isolated. Which of the following is the most likely causative agent?
- a. *Staphylococcus aureus*  
 b. *Enterococcus*  
 c. *Lactobacillus*  
 d. *Staphylococcus epidermidis*  
 e. *Bacteroides fragilis*
- St  
*ausius*
- No *B. fragilis*

- d. Endothelial cell expansion occurs.  
e. Transmigration of lymphocytes.
32. A 20 year old man experienced painful micturition for 4 days. Urethritis is suspected and Neisseria gonorrhoeae is cultured. Numerous neutrophils are present in a smear of exudate from the urethra. These neutrophils are most likely to have been caused to undergo diapedesis to reach the organisms as a consequence of release of which of the following chemical mediators?
- Histamine
  - Prostaglandin
  - Hageman factor
  - Bradykinin
  - Complement c5a

33. Fibrinous inflammation is typically found where:

- blood vessels
- skin
- pericardium
- bowel mucosa
- endocardium

34. Erythema and later on blisters appear on a child's hand after touching a hot pot on a stove. Which of the following terms best describe this process?

- Fibrinous inflammation
- Purulent inflammation
- Serous inflammation
- Ulceration
- Granulomatous inflammation

35. Which one of the listed substances is produced by the action of lipoxygenase on arachidonic acid, is a potent chemotactic factor for neutrophils, and causes aggregation and adhesion of leukocytes?

- C5a
- Prostacyclin
- IL-8
- Thromboxane A<sub>2</sub>
- Leukotriene B<sub>4</sub>

36. A 30 year old patient presented with a hard, non-tender swelling over the jaw which developed slowly over the last six months following tooth extraction. The swelling shows sinus tracts through which sulfur granules containing pus was draining. Which of the following is the most likely causative agent?

- Staphylococcus aureus*
- Enterococcus*
- Lactobacillus*

e. Squamous cell anaplasia.

23. During atrophy of cell:

- a. Protein synthesis increases.
- b. Cell disappears.
- c. Cell size decreases
- d. Cell size increases.
- e. Cellular organelles swell up.

24. In radiation injury basic mechanism is :

- a. Free radical formation
- b. Increase ATP production.
- c. Decrease intracellular Na...
- d. Decrease intracellular Ca.
- e. Inhibit protein synthesis.

25. A lesson shows non cellular central material surrounded by large multinucleated giant cell and epitheloid cells, the most likely lesion will be:

- a. Fibrinoid necrosis.
- b. Gangrenous necrosis.
- c. Coagulative necrosis.
- d. Caseous necrosis
- e. Liquefactive necrosis.

26. A man of 22-years develops marked right lower quadrant abdominal pain over the past day. Laparoscopic surgery is performed, and the appendix is swollen, erythematous, and partly covered by a yellowish exudate. It is removed, and a microscopic section shows infiltration with numerous neutrophils. The pain experienced by this patient is predominantly the result of which of the following two chemical mediators?

- 1. Complement C3b and IgG
- 2. Interleukin-1 and tumor necrosis factor
- 3. Histamine and serotonin
- 4. Prostaglandin and bradykinin
- 5. Leukotriene and HPETE.

27. Woman 40-years had laparoscopic surgery 3 months ago. Now she has a small 0.5 cm nodule beneath the skin at the incision site that was sutured. Which of the following cell types is most likely to be most characteristic of the inflammatory response in this situation?

- d. Incubation period, prodrome period, specific-illness period and convalescence period  
e. Incubation period, specific-illness period, convalescence period and prodrome period

18. Which of the following serological techniques is most sensitive?

- a. Agglutination test  
 b. ELISA  
c. Complement fixation test  
d. Hemagglutination test  
e. Radial immunodiffusion test

19. After recovery period, the individuals who may shed pathogens while remaining clinically well are called:

- a. Chronic patients  
b. Subclinically infected patients  
c. Shedders  
 d. Chronic carriers  
e. Patients having latent infection

20. Which of the microscopic techniques is specific for diagnosis?

- a. Light microscopy  
b. Compound microscopy  
c. Electron microscopy  
 d. Immunofluorescent microscopy  
e. Fluorescent microscopy

21. A 60 years old man developed shock. After recovery he was found to have focal neurological signs due to brain damage. The most likely changes expected to be seen in brain biopsy would be:

- a. Coagulative necrosis  
 b. Liquefactive necrosis  
c. Acute hemorrhagic change.  
d. Granulomatous change.  
e. Lacunary infarct.

22. The epithelium of the respiratory tract of a 35 year old habitual smoker is most likely to show:

- a. Stratified squamous metaplasia  
b. Simple squamous metaplasia.  
c. Mucus hyperplasia.  
d. Smooth muscular hyperplasia.

Squela

11. A patient was hospitalized after an automobile accident. His wounds became infected and treated with tobramycin, carbenicillin, and clindamycin. Five days after antibiotic therapy initiation, patient developed severe diarrhea and enterocolitis. Antibiotic associated diarrhea and the more serious pseudomembranous colitis can be caused by:
- Clostridium botulinum*
  - Clostridium perfringens*
  - Clostridium difficile*
  - B.cereus*
  - B. fragilis*
12. A 65 year old male presents with cold like symptoms for at least 3 days. He also has chills, chest pain and productive cough with bloody sputum. Exlood agar reveals alpha hemolytic colonies. Quelling test is also positive. Which of the following is the most likely cause?
- Corynebacterium*
  - Enterobacter spp*
  - Hemophilus*
  - Streptococcus pneumoniae*
  - Klebsiella pneumonia*
13. A 15 year old girl develops a sore throat, fever and exarache of approximately 4 week duration. Upon examination by her physician an erythematous rash is noted covering most of her body and her tongue appears like a strawberry. Which of the following is most likely the cause?
- Streptococcus pyogenes*
  - Staphylococcus aureus*
  - Staphylococcus agalactiae*
  - Streptococcus pneumoniae*
  - Staphylococcus epidermidis*
14. Mr. Hamid brought a canned Tuna fish to prepare burger. After eating this burger he had nausea, vomiting, diarrhea with diplopia, dysphagia, weakness of facial and respiratory muscles (ascending paralysis) but no rise in temperature. Symptoms of *C. botulinum* food poisoning developed 36 hrs after ingestion of burger. These symptoms are consistent with:
- Invasion of the gut epithelium by *C. botulinum*
  - Secretion of an enterotoxin
  - Endotoxin shock
  - Ingestion of a neurotoxin causing flaccid paralysis
  - Activation of cyclic AMP
15. A young female presented with signs and symptoms of urinary tract infection. Urine culture revealed Gram positive cocci, showing catalase and coagulase test negative. Which test distinguishes *S.epidermidis* from *Staph saprophiticus*?
- Catalase test
  - Optochin sensitivity test
  - Coagulase test
  - DNase test.
  - Novobiocin sensitivity test ✓

17 Pathology  
M. Amir  
F-15-129

Aisam Asghar  
Bilal Shahid

AZRA NAHEED MEDICAL COLLEGE  
3<sup>rd</sup> Year MBBS, Pathology Term Exam  
SEQ  
Date: 12-4-2017

Term

Marks: 50

Time allowed: 60 minutes

1. A culture of skin lesions from a patient with pyoderma (impetigo) shows numerous colonies surrounded by a zone of beta hemolysis on a blood agar plate. A Gram-stained smear shows gram positive cocci in chains. If you found the catalase result to be negative, which one of the following organisms would you most probably have isolated?
- a.  *Streptococcus pyogenes*  
b. *Staphylococcus aureus*  
c. *Staphylococcus epidermidis*  
d. *Streptococcus pneumoniae*  
e. *Streptococcus viridans*
2. The Coagulase test, in which the bacteria clump plasma to clot, is used to distinguish which of the following?
- a. *Streptococcus pyogenes* from *Enterococcus faecalis*  
b. *Streptococcus pyogenes* from *Staphylococcus aureus*  
c.  *Staphylococcus aureus* from *Staphylococcus epidermidis*  
d. *Staphylococcus epidermidis* from *Neisseria meningitidis*  
e. *Staphylococcus aureus* from *Streptococcus pneumoniae*
3. An outbreak of sepsis caused by *Staphylococcus aureus* has occurred in the newborn nursery. You are called upon to investigate. According to your knowledge of the normal flora, what is the most likely source of the organism?
- a. Colon  
b.  Nose  
c. Throat  
d. Vagina  
e. Skin
4. Which of the statements about the classification of Streptococci is incorrect?
- a. Pneumococci (*Streptococcus pneumoniae*) are alpha-hemolytic and can be serotyped on the basis of their polysaccharide capsules  
b. Enterococci are group D streptococci and can be classified by their ability to grow in 6.5% sodium chloride  
c. Although Pneumococci and the viridans streptococci are alpha-hemolytic, they can be differentiated by the bile solubility test and their susceptibility to optochin  
d. Streptococci pyogenes are identified by Lancefield grouping, which is based on the C carbohydrate in the cell wall  
e.  *Streptococcus agalactiae* causes rheumatic fever
5. A 60 year old woman is hospitalized following a stroke and a high grade fever with chills. She is catheterized due to urinary incontinence and receives cephalosporins for the treatment of pneumonia. Blood cultures and gram stain show gram positive cocci that were catalase negative and capable of growth in 6.5% sodium chloride. Which of the following is most likely the cause?
- a.  *Enterococcus faecalis*  
b. *Staphylococcus aureus*  
c. *Staphylococcus epidermidis*  
d. *Streptococcus pyogenes*  
e. Viridans streptococci

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



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

39. Anaphylactic shock
- a. Is seen after tuberculosis
  - b. Caused by IgG
  - c. Cannot lead to death
  - d.  Occurs as a result to reaction to penicillin
  - e. Takes many days to develop.
40. Approximately 30-60 minutes after being bitten by a "bug", a 26-year-old man noticed a localized swelling and erythema in the affected area. The edema is most likely the result of:
- a. Altered plasma oncotic pressure
  - b. Increased arterial hydrostatic pressure
  - c.  Increased vascular permeability
  - d. Lymphatic obstruction
  - e. Increased plasma protein levels.
41. A patient is scheduled to have a chronic abscess incised and drained. What would you expect microscopic examination of the contents of the abscess to most likely show?
- a. Lymphocytes and macrophages
  - b. An area of caseous necrosis
  - c. Any area of coagulative necrosis
  - d.  Neutrophils, lymphocytes, & plasma cells
  - e. An acute inflammatory infiltrate of PMNs
42. Which of the following would you expect to find in the alveoli in a patient with pneumococcal pneumonia of 24 hours duration?
- a. Serous inflammation
  - b. Fibrinous inflammation
  - c. Fibrino-purulent inflammation
  - d.  Suppurative inflammation
  - e. Serofibrous inflammation
43. A 45-year-old woman has a lung biopsy because of a 1.0 cm lesion seen on a chest x-ray. Histologic examination reveals epithelioid macrophages and lymphocytes around a focus of caseous necrosis. What is the best explanation for this form of necrosis?
- a.  Granulomatous inflammation.
  - b. Complement fixation
  - c. Local histamine release
  - d. PMNs releasing degradative enzymes
  - e. Suppurative inflammation
44. Which of the following events in acute inflammation occurs first?
- a. Chemotaxis
  - b. Emigration of white cells
  - c.  Hemostasis
  - d.  Margination
  - e. Phagocytosis

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

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