

**2022 PTM 4310 FINAL EXAM QUESTIONS MULTIPLE CHOICE QUESTIONS:**

Write in the spaces provided T (True) or F (False) or as specified by each question

1. Which of the following bacterial agents are common causative agents of bacterial meningitis:

- A. Haemophilus influenzae
- B. Streptococcus pneumoniae
- C. Corynebacterium diphtheria
- D. Bordetella pertussis
- E. Neisseria meningitidis

2. One of the reasons to combine antifungal agents in the treatment of 'stubborn fungal infections' include

- A. To reduce selective toxicity
- B. To broaden the spectrum of empiric antifungal therapy
- C. To kill all the spherules
- D. To enhance efficacy in the treatment of refractory fungal infections
- E. To prevent development of resistant organisms

3. The following antifungal agents belong to triazoles:

- A. Ketoconazole
- B. Voriconazole
- C. Mebendazole
- D. Metronidazole
- E. Itraconazole

4. In terms of mechanism of action, the membrane permeability antifungal agents include:

- A. Azoles T
- B. Polyenes T
- C. Allylamines F
- D. Echinocandins F
- E. Antimetabolites f

5. During antifungal susceptibility testing, the method that utilises a non-porous carrier strip 5mm wide and 60mm long is called

- A. Antifungal membrane tester
- B. E-Test
- C. Epislometer test
- D. VITEK II system
- E. Kirby-Bauer disc test

6. The following factors characterise *Bacteroides fragilis* species

- A. Consist of 10 subspecies
- B. Are transient flora of the large bowel
- C. Are pleomorphic and encapsulated
- D. They contain highly endotoxic Lipid A
- E. Infections are normally exogenous

7. Regarding infections of *Bacteroides* species, state True/False in the following statements

- A. Usually associated with deep pain and tenderness below the diaphragm
- B. Causes localised intra-abdominal abscesses
- C. May cause a self-limiting watery diarrhoea in children
- D. Infections are commonly polymicrobial
- E. More commonly causes suppurative thrombophlebitis and cancrum oris

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8. The typical sites of infections by *Bacteroides fragilis* include:

- A. Solid organs
- B. Perirectal
- C. The brain
- D. Abdomen and pelvis
- E. The integumentary system

9. In the pathogenesis of *Bacteroides fragilis*, the following are the effects of non-structural virulence factors

- A. Promotes adherence to host tissues
- B. Stimulates leukocyte chemotaxis and migration
- C. Lead to abscess formation
- D. Inactivates immunoglobulins
- E. Hydrolyse antibiotics

10. The pattern of fever in which the temperature spikes and falls without a return to the normal temperature levels is called

- A. Relapsing fever
- B. Remittent fever
- C. Recurrent fever
- D. Intermittent fever
- E. Fever seen in Tuberculosis

11. Regarding fever, the following are examples of endogenous pyrogens:

- A. IL-1
- B. TNF
- C. IL-6
- D. IFNs
- E. IL-9

12. Which of the following statements are True/False about viral hepatitis?

- A. All Hepatitis causing viruses belong to the same family/ genus
- B. Hepatitis A and E are very similar with respect to how they are spread
- C. Infection with Hepatitis D alone can result in severe disease
- D. Hepatitis B and C are known to cause cancer
- E. All of the statements above are true

13. Which of the following diseases qualifies as a zoonotic disease?

- A. Anthrax
- B. Ebola
- C. Poliomyelitis
- D. Rabies
- E. Brucellosis

14. Qualify the following statements about Lassa fever

- A. Has a long incubation period
- B. Has high morbidity, but low mortality rates
- C. Pregnant women have a higher rate of hospitalisation
- D. Typically presents with fever, pharyngitis and retrosternal chest pain
- E. There is no specific treatment available

The diagnosis of viral haemorrhagic fevers can be achieved via:

- A. Clinical examination
- B. Laboratory culture
- C. Serology
- D. RT-PCR
- E. ELISA

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16. Some common manifestations of enteroviral infections include:

- A. Fever
- B. Dehydration
- C. Aseptic meningitis
- D. Conjunctivitis
- E. Hand, foot and mouth disease

17. Indicate whether the following statements are True or False about enteroviruses:

- A. Belong to the genus picornavirus and replicate mainly in the gut
- B. Are **NOT** stable at acid pH
- C. Only have a single route of entry into the human body
- D. Are single-stranded naked RNA viruses with icosahedral symmetry
- E. There are at least 71 known serotypes

18. The transcription of the viral genome is dependent on its structure and composition. Which of these statements supports this?

- A. Double-stranded DNA can replicate in either the nucleus or cytoplasm
- B. Single-stranded DNA replicates in the nucleus and depends on host cell apparatus
- C. Double-stranded RNA has separate transcription of each segment to produce monosystronic mRNA
- D. Replication of single-stranded RNA takes place in the cytoplasm
- E. Retroviruses have their enzymes encoded and packaged for transcription

19. The mechanisms that allow viral entry into host cells include:

- A. Translocation of entire virus particle across the cytoplasmic membrane
- B. Fusion of virus envelope with the cell membrane
- C. Specific binding of a virus-attachment protein to a cellular receptor molecule
- D. Endocytosis of virus into intravenously vacuoles
- E. Virus capsid is partially or completely removed and viral genome expose

20. *Clostridia perfringens* is the causative agent for gas gangrene. Which of the following toxins is key in the pathogenesis of gas gangrene?

- A. Hyaluronidase
- B. Elastase
- C.  $\alpha$ -toxin
- D.  $\beta$ -toxin
- E. Streptolysin

21. The phase of fever characterised by sweating, fever breaks, and the patient's body temperature returning to normal is referred to as:

- A. Flushed phase
- B. The prodromal phase
- C. Defervescence phase
- D. Effervescence phase
- E. The chill phase

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22. The effects of fever on the digestive system include the following except:

- A. Indigestion
- B. Anorexia
- C. Increased rhythmical activity of longitudinal and circular muscles
- D. Abdominal distention
- E. Constipation

23. The *Neisseria gonorrhoeae* differs from *Neisseria meningitidis* in that, *N. gonorrhoeae*....

- A. Lacks the capsule
- B. Has capsule
- C. Ferments maltose
- D. Vaccine is not available
- E. Portal of entry is respiratory tract

XI Gono Phere  
G Xley Reat.

24. The following are virulent factors of *Neisseria gonorrhoeae*, except:

- A. Lipopolysaccharides
- B. IgM-1 Protease
- C. Opa proteins
- D. Porin proteins
- E. Lactoferrin receptors

IgA 1 Protease

25. The following is True/False about *Neisseria meningitidis*...

- A. Causes meningococcaemia
- B. Normal flora of nasopharynx and brain
- C. Humans are intermediate hosts
- D. Serogroups A and W135 are associated with disease in developed countries
- E. Can invade directly along perineural sheath of olfactory nerve

26. Regarding pigmentation, the following *Staphylococcal* species are Truly/Falsely described for colour:

- A. Golden yellow colonies - *Staphylococcus aureus*
- B. White colonies - *Staphylococcus epidermidis*
- C. Lemon-yellow colonies - *Staphylococcus saprophyticus*
- D. Cream white colonies - *Staphylococcus aureus*
- E. Greyish colonies - *Staphylococcus haemolyticus*

27. The following are examples of inflammatory staphylococcal infections, except....

- A. Toxic shock syndrome
- B. Empyema
- C. Impetigo
- D. Skin scalded syndrome
- E. Carbuncles

28. Risk factors of MRSA include?

- A. IV drug use/abuse
- B. Invasive device
- C. Recent hospitalisation or surgery
- D. Previous exposure to expanded cephamycins
- E. Buns

Regarding differentiation of *Streptococcus* species, the following is true...

- A. *Streptococcus agalactiae* is resistant to bacitracin
- B. *Streptococcus pyogenes* is resistant to bacitracin
- C. *Streptococcus pneumoniae* is sensitive to optochin
- D. *Streptococcus viridans* are sensitive to optochin
- E. None of the above

30. Regarding the haemolytic patterns of streptococcus species, the following is true....

- A. *Streptococcus pneumoniae* is gamma-haemolytic  $\alpha$
- B. *Streptococcus agalactiae* is beta-haemolytic  $\beta$
- C. *Streptococcus pyogenes* is alpha-haemolytic  $\beta\alpha$
- D. *Streptococcus viridans* are alpha-haemolytic
- E. *Enterococcus faecium* is gamma-haemolytic

31. The following is True/False about Necrotizing fasciitis (Flesh Eating Bacterial Disease)

- A. Prevents DIC in patients with varicose veins
- B. Causes ischaemia
- C. Involves destruction of the fat layers of the skin
- D. Is caused by *Streptococcus pneumoniae*
- E. Is caused by *Streptococcus pyogenes*

32. The following is True/False about the infections caused by *Streptococcus agalactiae*....

- A. Causes early-onset neonatal disease
- B. Causes late-onset neonatal disease
- C. Causes postpartum endometritis
- D. May cause pneumoniae in adult patients
- E. May cause urinary tract infections in pregnant women

33. Mycoses can be classified by areas of the body that are primarily affected:

- A. Superficial mycoses are those limited to extremities
- B. Cutaneous mycoses are those affecting slightly deeper in the epidermis
- C. Cutaneous is also associated with STDs
- D. Women are usually affected with deep seated mycoses
- E. A number of mycoses are sexually transmitted

34. Concerning Clostridia.

- A. they are anaerobic Gram-negative spore forming bacteria
- B. cause inflammatory, soft tissue infections and food poisoning
- C. found in soil, water, sewage, and GI tracts of animals
- D. can be thought of as the beauty and beast of the bacterial world
- E. infant botulism is a paralytic disease occurring in infants between 3 and 20 weeks

34. Write true or false against the following statements

- A. treatment of gas gangrene involves adequate surgical debridement
- B. antibiotics are only indicated for severe cases of gas gangrene
- C. oxygen therapy has got no role in *C perfringens* management
- D. incubation period for *C perfringens* is typically 1 week  $6-25$  hrs.
- E. risk factors for *C perfringens* include open wounds, septic abortion, and diabetic wounds

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**36. Characteristics of Pseudomonas.**

- A. form biofilms
- B. grow at higher temperatures of 20°C to 43°C
- C. have flexible nutritional requirements
- D. lipopolysaccharide is present on the outer membrane
- E. commensal of skin and intestines

**37. Concerning Pseudomonas aeruginosa.**

- A. It is a gram negative anaerobic motile rod
- B. Common colonizer of hospital equipment, catheters, and endotracheal tubes found in Hot tubs
- C. Most persistent infection that complicates the course of cystic fibrosis
- D. Highly associated with TB patients
- E. Causes ecthyma gangrenosum

**38. Some conditions are known to predispose to Pseudomonal infections, these may include:**

- A. cystic mycosis
- B. open wound and ulcers
- C. electrical burns
- D. leukemic patients
- E. diabetics

**39. Mycotic spread:**

- A. May be restrained by fungistatic properties of serum.
- B. Fungal cells can persist in macrophages and be spread far in the body
- C. Is also spread as the fungal cells float in the blood stream
- D. Can also happen via close contact in human beings
- E. Is only confined to the environment

**40. S aureus food poisoning classically shows the following**

- A. Explosive onset
- B. Short incubation period after food consumption (1-6 hrs)
- C. A whole family may be affected
- D. All year possibility of causing outbreaks
- E. May be implicated with many different foods

**41. In Bacillus cereus food poisoning**

- A. Diarrhoea and emetic are the 2 main clinical manifestations
- B. The diarrhoea comes after a long incubation period
- C. Emetic is associated with muscle cramps
- D. The duration of illness ranges to about 12 weeks
- E. Association with fried rice differentiates it from S aureus food poisoning

**42. Disruption of our local mechanical barriers may occur as a consequence of**

- A. Intravenous catheterisation
- B. Surgery
- C. Drugs
- D. Burns
- E. Radiation

**43. Which of the following organisms may cause sepsis in an immunocompromised patient?**

- A. Candida
- B. Staphylococcus
- C. Aspergillus
- D. Pyogenic bacteria
- E. Plasmodium

44. **Microbial eukaryotic cell structure is True or False?**

- A. More complex than prokaryotic cell.
- B. It contains a variety of membrane-enclosed organelles
- C. Contains self-twisting mitochondria
- D. Serves the sole purpose of reproductive binary fission
- E. Is the first to shrink and be absorbed by common reproduction.

45. **In clinical practice, diagnostic tests with 100% sensitivity and 100% specificity do not exist for the following reasons:**

- A. These are qualities unattainable in microbiology
- B. Such a test would give false results
- C. Laboratory is instrumental in guiding combination results
- D. A combination of tests with varying sensitivity and specificity often yields a higher level of diagnostic certainty
- E. Clinicians are able to make use of less than perfect tests to advantage

46. **No laboratory test is perfect; therefore, to interpret results of tests**

- A. Clinicians must have a sense of how reliable they are
- B. A true-positive result must represent presence of a pathogen
- C. A negative test must be treated with caution
- D. One must bear in mind that a false-negative result can alter disease management
- E. All results must be thought of as being false-negatives

47. **Information from the laboratory is useful in determining presence of pathogens and may be generated in a number of ways, these include**

- A. Microscopic examination of patient
- B. Measurement of pathogen-specific immune response in the patient
- C. Detection of pathogen-specific macromolecules in patient samples
- D. Numbering specimens in chronological order
- E. Cataloguing disease according to epidemics

48. **Laboratory service is indispensable to modern clinical medicine for the following reasons:**

- A. Identification of pathogens is very cardinal to disease management
- B. Laboratory helps in predicting the course of infection
- C. Laboratory is instrumental in guiding the selection of appropriate therapy
- D. Most antimicrobials are discovered in laboratories
- E. To curb down the spread of infections

49. **In culture identification, the following are either TRUE or FALSE**

- A. Phenotypic properties classically help in bacterial identification
- B. Motility, utilization of various nutrient substrates is never used
- C. Gram-staining is only done on lactobacilli
- D. Endogenous bacterial flora will determine success of culture
- E. Salmonella and shigella are never diagnosed via culture

50. **In Nucleic-Based Diagnosis of infection:**

- A. Double stranded DNA always requires separation by freezing
- B. Clinical specimens have to be selected very carefully
- C. Hybridization refers to breaking down genes into single molecules
- D. Probes are always short single stranded DNA or RNA sequences
- E. The precision of probe and target sequence interaction is highly dependent on specificity of probes

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51. Infective endocarditis has been classified according to:

- A. Age of the patient
- B. Clinical presentation
- C. Tempo of the clinical illness
- D. Microbiological cause
- E. Clinical setting or site of infection

52. The complement system is extraordinarily complex; the following is TRUE or FALSE of this system:

- A. It mediates a large number of biological effects
- B. It also interacts with other systems such as blood clotting
- C. It has many components that are known by unfamiliar names
- C. It derives its name from the original belief that it "complements" or "completes" the action of antibodies
- E. The complement system is always charged

53. Which of the following statements are true about *Mycobacterium tuberculosis*?

- A. the gold standard for diagnosis of TB is GeneXpert
- B. secondary drug resistant tuberculosis results from infection with a drug resistant strain.
- C. strains resistant to isoniazid and rifampicin are designated multi-drug resistant or MDR TB
- D. strains resistant to isoniazid, rifampicin and second-line agents such as fluoroquinolones are designated extensively drug resistant or XDR TB
- E. TB is the leading cause of death among HIV/AIDS patients in our setting

54. Concerning *Mycobacterium tuberculosis*.

- A. painless enlargement of lymph nodes resulting from infection by *M. tuberculosis* can affect virtually any region of the body
- B. can affect the vertebral bodies to cause pott disease
- C. damage to the host is caused by the secreted toxins
- D. causes a delayed-type hypersensitivity reaction
- E. damage to the host is caused by the immune response

55. Which of the following statements regarding *Mycobacterium tuberculosis* is true?

- A. Is a slow-growing, obligate anaerobe
- B. The acid-fast staining characteristic of *Mycobacteria* spp. results from the mycolic acid linked to the cell wall.
- C. The bacterium is usually acquired by inhaling aerosolized droplet nuclei.
- D. Active tuberculosis (TB) most often causes pulmonary disease associated with fever, weight loss, and drenching night sweats.
- E. Doesn't cause infection in immunocompetent

56. HIV and AIDS related malignancies include.

- A. Kaposi Sarcoma caused by HHV6
- B. Cervical cancer associated with low-risk HPV strains
- C. Non-Hodgkin lymphoma
- D. Anal cancer
- E. Lung cancer

57. In opsonisation and opsonins:

- A. Phagocytes are not normally equipped for highly efficient uptake of microbial particles
- B. Unless opsonised, neutrophils will phagocytise only a relatively small portion of bacteria in an infection
- C. The term "opsonins" refers to enzymes which breakdown bacteria
- D. Viruses must universally be opsonized before they can be taken in by cells
- E. Failure of opsonization accounts for the high rise in TB cases

58. Methods used in control of cholera in Zambia include;

- A. Washing of hands with soap and water for suspected cases
- B. Cancellation of public gatherings
- C. Burials of the deceased is not left to relatives but authorities
- D. Fumigation and appropriate disposal of waste
- E. Prophylactic antibiotic treatment of affected house holds

59. Cholera toxin

- A. Is protein in nature
- B. Has three subunits
- C. Is an exotoxin
- D. Is an endotoxin
- E. Subunit A binds to the gangliosides

60. Confirmatory diagnosis of cholera is always made from;

- A. Clinical signs and symptoms
- B. Rectal swabs and stool examination
- C. Type of response from type of antibiotics used
- D. Macroscopy examination of stool
- E. Combination of the above

61. Below are common causative agents of nosocomial infections

- A. Staphylococcus aureus
- B. E. coli
- C. Pseudomonas aeruginosa
- D. Streptococcus pyogenes
- E. Klebsiella

62. Concerning HIV.

- A. Contains RNA dependent RNA polymerase
- B. Reverse Transcriptase is coded by the *pro* gene
- C. Infects macrophages via CXCR4 co-receptors
- D. Reservoir cells include B lymphocytes
- E. Carries two identical RNA molecules

63. Concerning Paramyxoviruses.

- A. Cause respiratory tract infections
- B. Non-enveloped, non-segmented, positive-sense, single-stranded RNA viruses
- C. Non-enveloped, segmented, double-stranded viruses
- D. Enveloped, non-segmented, negative-sense, single-stranded viruses
- E. Enveloped, double-stranded DNA viruses

71.

64. The following are Paramyxoviruses.

- A. Parainfluenza
- B. Rubella
- C. Mumps
- D. Measles
- E. Rhinovirus

65. Common manifestations of Rubeola include?

- A. Fever
- B. Patent ductus arteriosus
- C. Cataracts
- D. Cough
- E. Rhinitis

66. The following are complications of Measles.

- A. Giant cell pneumonia
- B. Orchitis
- C. Pancreatitis
- D. Papilledema
- E. Dementia and visual disturbances

67. Concerning Orthomyxoviruses.

- A. Influenza Viruses causes croup in children less than 5 years old
- B. Contain neuraminidase (NA) that bind to the host cells
- C. Segmented viruses, positive-sense, single-stranded RNA genome
- D. Viral replication involves reassortment
- E. Transmission via respiratory droplets

68. The following persons are important to consider when constituting a hospital Infection control committee

- A. Microbiologist
- B. Infection control doctor
- C. Infection control nurse
- D. Ward In-charges
- E. Driver

69. A 20 years male patient present to UTH filter clinic complaining of abdominal pain and passing of bloody diarrhoea. The most likely causative agent of such diarrhoea is

- A. *E. coli*
- B. *Vibrio cholerae*
- C. *Shigella dysenteriae*
- D. *Yersinia enterocolitica*
- E. *Citrobacter freundii*

70. The following are classical symptoms of pyelonephritis:

- A. Persistent and recurrent fever
- B. Urgency in combination with fever
- C. Leukocytosis, pus, blood
- D. Fever, flank pain, tenderness
- E. Enlarged reproductive organs

71. The digestive system is often referred to as a microbiologist's paradise; this is due to the fact that:

- A. In health or disease, this system always has microorganisms
- B. It is unsurpassed in microbiologic variety and complex
- C. It varies in level of colonization from one area to another
- D. There is a very resistant community of flora
- E. The frequency of infections is too high in this system

72. Despite being so heavily colonized, the digestive system still enjoys some special defences in each area of this system. These defences include:

- A. Peristaltic flow of liquids along the system
- B. Low pH in the oropharynx
- C. Shedding of epithelium
- D. Normal flora
- E. Local inflammation

73. Acute meningitis may be caused by the following organisms:

- A. *Klebsiella species*
- B. *Mycobacterium leprae*
- C. *Campylobacter jejuni*
- D. *E coli*
- E. *N meningitidis*

74. Bacterial factors predisposing to UTI are:

- A. The urinary tract is open for them to enter
- B. The ability of some organisms to stick to the mucosa of the urinary tract
- C. Urine passage ensures selection for resistant species
- D. P pili is known to play a role in disease establishment
- E. The pH of the UT favours microbial habitat

75. Infections of the skin and soft tissues may be divided into:

- A. endogenous infections resulting from direct invasion from the environment
- B. Inborn infections that we are born with
- C. congenital skin and soft tissue infections passed in pregnancy
- D. Toxin-induced skin diseases caused by toxin produced from a distant site
- E. Exogenous infections that are related to existing diseases

76. The following are true zoonotic illnesses

- A. Plague
- B. Anthrax
- C. Tularemia
- D. Candidiasis
- E. Yellow fever

77. The vast majority of sepsis occurs in patients with defects in host defences. These include:

- A. Disruption or penetration of anatomical barriers
- B. Devitalised tissue
- C. Complement defects
- D. Immune defects
- E. Defective granulocyte function

78. The organism clostridia cause infections that vary both in infectivity and clinical manifestation, these include:

- A. Botulism
- B. Food poisoning
- C. Tetanus
- D. Spasmin
- E. Gangrene

79. STDs that cause genital ulcers include:

- A. Anal fistula
- B. Chancroid
- C. Herpes Zoster
- D. Syphilis
- E. Measles spots

80. Some of the factors that contribute to the spread and progression of STDs include the following:

- A. Each STD presents a challenge in diagnosis, therapy and prevention
- B. A large number of biological and social forces are involved in the dynamics of their transmission
- C. They are synonymous with normal infections
- D. They are all indolent in nature
- E. The duration of their infectiousness is very short

81. The following are some of the complications of STDs in women and children

- A. Failure to thrive
- B. Risk of potentially fatal tubal pregnancy increases
- C. STDs can cause spontaneous abortion
- D. Women may become infertile
- E. Sexually acquired HPV may progress to cervical cancer

82. Acute manifestations of most frequent STDs include

- A. Mucopurulency
- B. Genital ulcers
- C. Dysplasia and cancer
- D. Progressive wasting
- E. Intermittent vaginal irritation

83. Symptoms of cystitis include

- A. Dysuria
- B. Urgency
- C. Increased frequency of urination
- D. Fever
- E. Heavy bladder

84. Pathogenic fungi:

- A. May exist as moulds or yeasts
- B. May be filamentous or unicellular
- C. Are free living in nature and often only cause infection when disrupted
- D. Cause a variety of diseases which all manifest as respiratory infections
- E. Adopt strange shapes and structures

85. Mycoses can be  
----- A. Superficial  
----- B. Cutaneous  
----- C. Cutaneous  
----- D. Systemic

85. **Mycoses can be classified by areas of the body that are primarily affect:**

- A. Superficial mycoses are those limited to extremities
- B. Cutaneous mycoses are those affecting slightly deeper in the epidermis
- C. Cutaneous is also associated with STDs
- D. Women are usually affected with deep seated mycoses
- E. A number of mycoses are sexually transmitted

86. **Mycotic spread:**

- A. May be restrained by fungistatic properties of serum.
- B. Fungal cells can persist in macrophages and be spread far in the body
- C. Is also spread as the fungal cells float in the blood stream
- D. Can also happen via close contact in human beings
- E. Is only confined to the environment

87. **Entry of organisms responsible for nosocomial infections may be via**

- A. Inadequate sterilised hospital equipment
- B. Ingestion of community organisms
- C. Accompanying medication
- D. Eating contaminated food within the hospital
- E. Hospital procedures such as catheterisation

88. ***S aureus* food poisoning classically shows the following**

- A. Explosive onset
- B. Short incubation period after food consumption (1-6 hrs)
- C. Whole family may be affected
- D. All year possibility of causing outbreaks
- E. May be implicated with many different foods

89. **In *Bacillus cereus* food poisoning**

- A. Diarrhoea and emetic are the 2 main clinical manifestations
- B. The diarrhoea comes after a long incubation period
- C. Emetic is associated with muscle cramps
- D. The duration of illness ranges to about 12 weeks
- E. Association with fried rice differentiates it from *S aureus* food poisoning

90. **Which of the following organisms is associated with dysentery?**

- A. clostridia
- B. cholera
- C. staphylococci
- D. campylobacter
- E. Listeria

91. **Disruption of our local mechanical barriers may occur as a consequence of**

- Intravenous catheterisation
- B. Surgery
- C. Drugs
- D. Burns
- E. Radiation

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92. Which of the statements is true?

- A. Damage to mucous membrane e.g. in Intravenous catheterisation might result in *Staphylococcus epidermidis* infection
- B. Patients with severe burns might develop infections due to *S. aureus* and *P. aeruginosa*
- C. Pseudomembranous colitis is caused by *Pseudomonas aeruginosa*
- D. Mycobacterial infection might be a problem in patients with AIDS
- E. Helper T- cells play an important role in humoral immunity

93. Which of the following organisms may cause sepsis in an immunocompromised patient?

- A. *Candida*
- B. *Staphylococcus*
- C. *Aspergillus*
- D. Pyogenic bacteria
- E. *Plasmodium*

94. State whether the following bacteria are properly matched with the type of disease they cause, (True or False)?

- A. Enterotoxigenic *E. coli* ----- → Food poisoning
- B. *Staphylococcus aureus* ----- → Food poisoning
- C. *Shigella* ----- → Traveller's diarrhoea:
- D. *Clostridium perfringens* ----- → Bloody diarrhoea
- E. *Vibrio parahaemolyticus* ----- → Dysentery

95. Indicate whether each of the following statements is TRUE or FALSE.

- A. HIV-1 and HIV-2 are more closely related to each other than to SIV.
- B. HIV-1 causes immune suppression in both humans and chimpanzees
- C. HIV-1 is endemic in the West Africa.
- D. The anti-HIV drugs zidovudine (AZT) and indinavir both act on the same point in the viral replication cycle.
- E. T cell activation increases transcription of the HIV proviral genome

96. Sexually transmitted diseases (STDs) are a broad but relatively well-defined group of infectious diseases, which of the following statements is/are TRUE/FALSE of sexually transmitted diseases?

- A. they generally show acute manifestations that often progress to a chronic clinical picture
- B. their agents are highly varied
- C. despite advances in microbial chemotherapy, the incidence of STDs has dramatically increased worldwide
- D. promiscuity perpetuates STDs
- E. Condoms are a sure way of promoting STDs

97. STDs that cause genital ulcers include

- A. anal fistulae
- B. chancroid
- C. herpes zoster
- D. syphilis
- E. measles spots

38. Infection with the following organisms also predisposes to infection with STDs

- A. *E. coli*
- B. HIV
- C. *P. aeruginosa*
- D. *Bacteroides*
- E. *H. ducreyi*

15 99. Infection with certain agents of STDs such as Chlamydia has its problems, particularly with duration of infectivity, t is so because:

- A. Chlamydia takes long to cause infection
- B. such organisms often cause asymptomatic disease
- C. carriers may not know that they are infected and thus may potentially transmit the disease
- D. treatment may be delayed and thus be ineffective
- E. such diseases are only congenitally acquired

100. The following are some of the complications of STDs in women and children

- A. failure to thrive
- B. risk of potentially fatal tubal pregnancy increases
- C. STDs can cause spontaneous abortion
- D. women often become blind
- E. sexually acquired HPV may progress to cervical cancer

101. In making the diagnosis of filariasis, the correct statement is: -

- A. *Brugia malayi* has a sheath
- B. *Brugia timori* has no nuclear at the tip tail end
- C. *Loa loa* has two distinct nuclei in the tip of the tail
- D. *Onchocerca volvulus* has no nuclei up to the tip
- E. *Wuchereria bancrofti* has two distinct nuclei in the tip of the tail

102. The recommended use of antimalarial drugs:-

- A. Sulphadoxin Pyrimethamine is 1st line in simple malaria in adults
- B. Primaquine has effect against gametocysts
- C. Sulphadoxin Pyrimethamine is first line in 1<sup>st</sup> line trimester pregnancy
- D. Artemisinin + Lumefantrine is first line in simple malaria in adults
- E. Quinine is first line in malaria in pregnancy.

103. With respect to Malaria diagnosis: -

- A. Thin smear can be used for parasitemia in non-endemic areas
- B. Thin smear is used for specie identification in both endemic and non-endemic areas
- C. Thick smear is routinely used in malaria follow-up in endemic areas
- D. Thick smear is used for specie identification
- E. Gametocytes cannot be seen on a thin smear

104. Concerning Tapeworm infections this is true:

- A. Eating under cooked beef results in taeniasis
- B. *Taenia solium* can present as taeniasis in the pig
- C. Cows are the definitive host in *Taenia saginata*
- D. Lots of eggs of *taenia saginata* are frequently found in the cow's faeces
- E. Cysticercosis is gotten by eating under cooked pork

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105. The following parasites are detectable in blood specimen obtained at night; -

- A *Onchocerca volvulus*
- B *Brugia timori*
- C *Loa loa*
- D *Wuchereria bancrofti*
- E *Brugia malayi*

16 106. The following are transmitted by ingestion of a morphological stage/form known as egg:-

- A *Taenia saginata*
- B *Entamoeba coli*
- C *Toxoplasma gondii*
- D *Isospora belli*
- E *Taenia solium*

107. In African Trypanosomiasis the following are possible in the 2<sup>nd</sup> Stage (blood stage):

- A Chancre
- B Enlarged lymph nodes
- C Sleepiness
- D Fever
- E Kerandel sign

108. The Following are correct statements: -

- A microfilariae of *Loa loa* can be detectable in CSF
- B Infection with *Onchocerca volvulus* can result in loss of sight
- C *Wuchereria bancrofti* causes severe loss of skin elasticity
- D *Brugia malayi* causes "Fugitive" (Calabar) lesions
- E Mosquitoes can transmit *Brugia timori*

109. These are true statement concerning African Trypanosomiasis: -

- A *Trypanosoma cruzi* is an intracellular parasite
- B *Trypanosoma brucei rhodesiense* is an extracellular parasite
- C *Trypanosoma brucei gambiense* is transmitted by triatomine bug
- D Chagoma is a clinical manifestation of Gambian Trypanosomiasis
- E West African Sleeping Sickness tends to be the chronic form

110. True concerning *Entamoeba histolytica*

- A Diagnosis is made by isolating cysts in cerebral spinal fluid
- B Large intestine is a secondary site
- C Trophozoites are the invasive stage
- D Drug of choice is Mebendazole
- E Bloody diarrhoea is mainly in the acute stage

111. These definitions are correct: -

- A Commensalism an association where it is either both lose or both benefit
- B Mutualism is always negative
- C Obligate Parasite is always pathogenic
- D Definitive Host has the mature forms of the parasite
- E In the Intermediate host the sexual reproduction takes place

112. True concerning *Toxoplasma gondii*:-

- A Oocysts are passed out in stool of intermediate hosts
- B Bradyzoites are the mostly found in definitive hosts
- C Humans most common Infective stages/forms are Oocysts
- D Taquizoites are routinely isolated in stool
- E Cats are intermediate host

The following statements are correct:-

113. A Homozygote sickle cell anaemia are protected against *falciparum*  
B HBAS are protected against *vivax*  
C Absence Duffy blood group factor increases risk of infection with *vivax*  
D Absence Glucose-6-Phosphate Dehydrogenase is protective against *falciparum*  
E Severe malaria is seen only in the first episode of malaria

114. True regarding *Cystoisospora belli*:

- A Diarrhoea usually has mucus  
B The diarrhoea tends to be of an acute nature  
C Drug of choice is Praziquantel  
D Blood slide can be used to confirm diagnosis  
E Oocysts with two sporozoites are the infective stage/form

115. The following are correct statements concerning Malaria Pathogenesis:

- A Plasmodium falciparum has three pathogenesis mechanism  
B One of the pathogenesis mechanism is known as Exoerythrocytic mechanism  
C Erythrocytic mechanism occurs only in *ovale* and *vivax*  
D Severe anaemia is due to Cytoadherence mechanism  
E Nephropathies in malaria can be as a result of immunopathology mechanism

116. True concerning *Cryptosporidiosis*

- A The drug of choice is Nitazoxanide  
B It is an intracellular parasite  
C Humans are intermediate hosts  
D The infective stage is an oocyst with 2 sporocysts with 4 sporozoites each  
E The diarrhea is greenish in colour

117. In describing pathophysiology of fever in Malaria the correct description is:

- A Cyanotic lips are seen in Hot stage  
B Massive sweating in the hot stage  
C Headache and vomiting are the mostly experienced in the hot stage  
D Shivering is mostly seen in the Sweating Stage  
E The temperature is highest towards the end of Sweating Stage

118. The correct statement concerning *Cryptosporidiosis*:-

- A. Type 1 Meronts has eight merozoites  
B. Less merozoites could mean more diarrhoea  
C. Asexual phase is caused by both type 1 Meronts and type 2 Meronts  
D. Type 2 Meronts commence the sexual stage of the life cycle  
E. More Type 2 Meronts precedes the observation

119. The truth concerning *Toxoplasma gondii*:-

- A. Undercooked meat contains tachyzoites  
B. Disease is confined to the gastrointestinal tract  
C. Can be transmitted percutaneously  
D. They are blood and tissue flagellates  
E. Congenital transmission occurs only pregnant women with preexisting serious disease

120. The sequentially correct segment of the life cycle *Plasmodium Ovale* is: -

- A Mature trophozoite, schizont, merozoite, gametocyte, zygote
- B Oocyst, trophozoite ookinete, hypnozoite, trophozoite
- C Sporozoite, hypnozoite, trophozoite, schizonts, merozoite
- D Schizont, zygote gametocyte, Oocyst ookinete, Sporozoite
- E Gametocyte zygote Hypnozoite ookinete, Oocyst, Sporozoite

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121. The following are arboviruses transmitted by mosquitoes

- A. Yellow fever
- B. Chikungunya
- C. Dengue fever
- D. Zika virus
- E. None of the above is true

122. The following is true about mosquitoes

- A. Can transmit filaria
- B. Can transmit bacteria
- C. Males are hematophagous
- D. Blood meals are vital for maturation of eggs
- E. All the above are correct

123. The following arthropods transmit disease passively

- A. Fleas
- B. Flies
- C. Cockroaches
- D. Mosquitoes
- E. All the above

124. House flies transmit the following diseases

- A. Hepatitis A
- B. Cholera
- C. Shigellosis
- D. Giardiasis
- E. None of the above

125. Concerning fleas

- A. Can transmit Hepatitis B
- B. Allergic reaction do occur from their bites
- C. Can transmit *Yersinia pestis*
- D. *Yersinia pestis* is the only organism transmitted
- E. All the above are true

126. Female genital schistosomiasis can present with the following

- A. infertility
- B. yellowish sandy patches on the cervix
- C. Genital warts
- D. Vaginal itchiness
- E. Postcoital bleeding

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134. The following parasites inhabits the large intestine

- A. *Enterobius vermicularis*
- B. *Trichuris trichiura*
- C. *Oesophagostomum* spp
- D. *Ascaris lumbricoides*
- E. *Trichinella spiralis*

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135. Concerning diagnostic methods for soil transmitted helminths

- A. stool concentration method is used
- B. Direct wet microscopy is used
- C. Demonstrating larva in stool is used in some helminths
- D. Floatation method can also be used
- E. None of the above is true

136. The following are symptoms associated with giardiasis, except

- A. Jaundice due to obstruction of the gall bladder
- B. Bloody stool
- C. Shortening of villi
- D. Duodenal irritation
- E. Multiple ulcers

137. Pathogenic effects of *Giardia lamblia* include

- A. Microvilli elongation
- B. Bloody stool
- C. Steatorrhoea
- D. Flashed-shaped ulcers
- E. Occassionaly, intestinal perforation, peritonitis and even death may occur

138. With respect to *Balantidium coli*

- A. It is the only flagellate protozoan parasite of pigs
- B. It is the smallest protozoan parasite of humans
- C. Natural host is man
- D. Accidental host is pig
- E. Human beings acquire infection by ingestion of food and water contaminated with faeces containing the trophozoites of *B. coli*

139. The following statements are true about *Trichomonas vaginalis*, except

- A. Facultative parasite-cannot live without close association with vagina, urethral or prostatic tissues
- B. Infects squamous epithelium but not columnar epithelium
- C. Cosmopolitan in distribution, however prevalence is not uniform because of sanitary and hygiene habits
- D. *T. vaginalis* can survive at a high pH
- E. Once established, it causes a shift toward alkalinity (pH 5-6) which further encourages its growth

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40. Indicate the correctness of the following statements

- A. Symptomatic disease or balantidiasis resembles giardiasis causing diarrhea or frank dysentery with abdominal colic, tenesmus, nausea, and vomiting.
- B. It is not an invasive parasite and It remains adherent to the squamous epithelium but not columnar epithelium
- C. Chronic diarrhoea with malabsorption syndrome (Steatorrhoea i.e... stool contains small amounts of mucus and fat, leading to tropical sprue or the yellow syndrome & foul smelling)
- D. Trichomoniasis is associated with vulvovaginitis, purulent vaginal discharge (leukorrhoea) concurrent with *Candida albicans*
- E. Regarding Microsporidia, cysts are the infective stage of microsporidia and the only stage of life cycle capable of existing outside the host cell

141. With respect to urogenital and intestinal flagellates

- A. Infection with *Trichomonas vaginalis* predisposes to cervical cancer
- B. The infective stage of *Trichomonas vaginalis* is the cyst
- C. *Trichomonas hominis* causes infection of the intestines
- D. *Giardia lamblia* trophozoite is pear-shaped with a single flagellum
- E. *Giardia lamblia* parasites undergo an indirect life cycle

142. The following features apply to Microsporidia morphology, except:

- A. The polar tube is an extrusion mechanism for injecting infective spore contents into the host cell
- B. Exospore is chitinous
- C. Endospore is proteinaceous
- D. Spores are surrounded by thick double-layered cyst wall
- E. Spores are oval to cylindrical in shape with a polar filament

143. The following Microsporidia species cause:

- A. *Nosema ocularum* ..... Myositis
- B. *Enterocytozoon bienersi* ..... Myositis
- C. *Encephalitozoon hellem* ..... Mositis
- D. *Enterocytozoon* ..... Diarrhoea and wasting
- E. *Microsporidium africanum* ..... Myositis

144. Microsporidia:

- A. Spores are the infective stage
- B. Sporoplasm (non-infectious material)
- C. Undergo repeated binary fission (sporogony)
- D. Produce large number of spores (merogony)
- E. Horizontal transmission does not occur

145. Indicate the correctness of the following statements

- A. Definitive host is the host in which the adult parasite lives and undergoes asexual reproduction e.g. mosquito acts as definitive host in malaria
- B. *Giardia lamblia* trophozoite has dorsal surface which is concave
- C. *Giardia lamblia* trophozoite has a ventral surface which is concave
- D. *Giardia lamblia* trophozoites are normally detected in formed stool and cysts in diarrhoeic stool
- E. Tinidazole is an alternate drug in treating trichomoniasis

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**146. Regarding intestinal nematodes of man:**

- A. Enterobius vermicularis is not a soil-transmitted helminth
- B. Strongyloides stercoralis is the smallest intestinal nematode
- C. Capillaria philippinensis lives in the lumen of the small intestine
- D. Trichinella spiralis is oviparous
- E. Trichuris trichiura has a similar mode of transmission as Ascaris lumbricoides

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**147. This parasite undergoes lung migration phase in its life cycle:**

- A. Ascaris lumbricoides
- B. Hookworm
- C. Trichuris trichiura
- D. Enterobius vermicularis
- E. Strongyloides stercoralis

**148. Ascaris lumbricoides**

- A. is found in the lumen of the small intestine
- B. lays infective eggs which are passed out in the stool
- C. is transmitted via faecal oral route
- D. adults can cause ectopic migration
- E. sucks human blood

**149. Regarding hookworm anaemia:**

- A. The condition is due to vitamin B12 deficiency
- B. It is seen in chronic hookworm infection
- C. Infected patient may present with pallor and tiredness
- D. Red blood cells are microcytic and hypochromic
- E. It is caused by Necator americanus

**150. The following are examples of biological transmission**

- A. Cyclo-propagative
- B. Propagative
- C. Cyclo-developmental
- D. Transovarial
- E. None of the above are true

**THE END**