DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

Test Booklet Series

A

T. B. C. : AP – 7 – 17/18

TEST BOOKLET

ASSISTANT PROFESSOR IN O.M.E.S.

Sl. No. 1345

(MICROBIOLOGY)

Time Allowed : 3 Hours

Maximum Marks : 200

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. **YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.**
5. This Test Booklet contains **200** items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided by **using BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. **There will be no negative marking for wrong answers.**
8. Before you proceed to mark (darken) in the Answer Sheet the responses to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

SEAL

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1. Katayama fever is due to :
   (A) Heavy infestation of **Oncocerca volvulus**
   (B) Heavy infestation of **Schistosoma mansoni**
   (C) Heavy infestation of hookworm
   (D) Heavy infestation of **Plasmodium falciparum**

2. Autoinfection is seen in all except :
   (A) **Strongyloides stercoralis**
   (B) **Hymenolepis nana**
   (C) **Cryptosporidium species**
   (D) **Paragonimus westermani**

3. **Taxoplasma gondii** has :
   (A) One infectious stage
   (B) Two infectious stages
   (C) Three infectious stages
   (D) Four infectious stages

4. Plasma cells are a type of :
   (A) T cells
   (B) B cells
   (C) Basophils
   (D) Eosinophils

5. Antigen presenting cells include :
   (A) T cells and B cells
   (B) Eosinophils and basophils
   (C) Macrophages and dendritic cells
   (D) Plasmids and chromosomes

6. Gram positive bacteria are all **EXCEPT** :
   (A) **Staphylococcus aureus**
   (B) **Clastridium tetani**
   (C) **Salmonella Typhi**
   (D) **Bacillus anthracis**

7. ELISA stands for :
   (A) Enzyme linked immune standard assay
   (B) Elution linked isochromatic staining assay
   (C) Enzyme linked immunosorbant assay
   (D) Elevated lysine isochromato-phraphic assay

8. Who first demonstrated vaccination ?
   (A) Robert Koch
   (B) Louis Pasteur
   (C) Alexander Flemming
   (D) Watson and Crick

9. Loeffler's bacillus is also known as :
   (A) Pneumococcus
   (B) **Neisseria gonorrhoeae**
   (C) **Bartonella henselae**
   (D) **Corynebactrium diphtheria**

10. An immunoglobulin has :
   (A) 1 light chain and 2 heavy chains
   (B) 2 light chains and 1 heavy chain
   (C) 1 light chain and 1 heavy chain
   (D) 2 light chains and 2 heavy chains

11. Blood borne viruses are all **EXCEPT** :

(A) Rotavirus

(B) HIV

(C) Hepatitis B virus

(D) Hepatitis C virus

12. All of them are transmitted by mosquitoes **EXCEPT** :

(A) **Plasmodium vivax**

(B) Dengue virus

(C) Japanese B encephalitis

(D) **Leishmania donovani**

13. **Mycobacterium tuberculosis** is a :

(A) Bacteria

(B) Virus

(C) Fungus

(D) Parasite

14. Activation of compliment takes place through any of these pathways **EXCEPT** :

(A) The Classical pathway

(B) The Cascade pathway

(C) The Alternative pathway

(D) The Lectin pathway

15. Modes of genetic material transfer between bacteria are all **EXCEPT** :

(A) Conduction

(B) Conjugation

(C) Transformation

(D) Transduction

16. All the following are false in Koch postulates **EXCEPT** :

(A) The microorganism must be present in every case of the disease and also in the healthy host

(B) The suspected microorganism must be isolated only from pure culture but not from the lesions of the disease

(C) The isolated organism, in pure culture, when inoculated in suitable laboratory animals should produce a similar disease

(D) The same microorganism must not be re-isolated in pure culture from the lesions produced in experimental animals

17. All the following are RNAs **EXCEPT** :

(A) Messenger RNA (mRNA)

(B) Ribosomal RNA (rRNA)

(C) Transfer RNA (tRNA)

(D) Cloning RNA (cRNA)

18. The bacterial growth curve include the following :

(A) Height phase

(B) Lag Phase

(C) Complementary phase

(D) Analog phase

19. All are appendages of locomotion **EXCEPT** :

(A) Cilia

(B) Pseudopodia

(C) Flagella

(D) Pilli

20. Milk is sterillized by :

(A) Autoclaving

(B) Hot air oven

(C) Pasteurization

(D) Steaming

21. **Naegleria fowleri** infection is diagnosed by :

(A) Blood film

(B) Serological examination

(C) Lumber Puncture

(D) None of the above

22. Each of the following statements concerning **Giardia lamblia** is correct except :

(A) **G. lamblia** has both a trophozoite and cyst stage in its life cycle

(B) **G. lamblia** is transmitted by the fecal oral route from both human and animal sources

(C) **G. lamblia** causes hemolytic anemia

(D) **G. lamblia** can be diagnosed by the string test

23. After ingestion of **Giardia lamblia**, cyst hatching takes place in the :

(A) Stomach

(B) Lower part of small intestine

(C) Upper part of small intestine

(D) Colon

24. Each of the following statements concerning **Trichomonas vaginalis** is correct except :

(A) **T. vaginalis** is transmitted sexually

(B) **T. vaginalis** can be diagnosed by visualizing the trophozoite

(C) **T. vaginalis** can be treated effectively with metronidazole

(D) **T. vaginalis** causes bloody diarrhea

25. Each of the following parasite is transmitted by mosquitoes except :

(A) **Leishmania donovani**

(B) **Wuchereria bancrofti**

(C) **Plasmodium vivax**

(D) **Plasmodium falciparum**

26. Each of the following statements concerning **Ascaris lumbricoides** is **correct except** :

(A) **Ascaris lumbricoides** is one of the largest nematode

(B) **Ascaris lumbricoides** can cause pneumonia

(C) Both dogs and cats are intermediate host of **Ascaris lumbricoides**

(D) **A lumbricoides** is transmitted by ingestion of eggs

27. Following are true about **Trypanosoma rangeli** except :

(A) Reduvid bug is the vector

(B) Primary reservoir are wild animals

(C) Trypomastigote stage is detected in blood

(D) Amastigote stage can be detected in tissue

28. Sappinia diploidea causes :

(A) Diarrhea

(B) Amoebic encephalitis

(C) Pneumonitis

(D) Tertian fever

29. Mode of transmission of **Schistosoma mansoni** is through :

(A) Penetration of the adult worm through intact skin

(B) Ingestion of contaminated food containing adult worm

(C) Penetration of the cercariae through intact skin

(D) Ingestion of metacercariae through contaminated food and water

30. SLE therapy is associated with the following parasitic infections :

(A) Cerebral malaria

(B) Cerebral toxoplasmosis

(C) Neurocysticercosis

(D) Primary amoebic meningoencephalitis

31. Respiratory cryptosporidiosis is seen in which type of immunocompromised patients :

(A) Bone marrow transplant patients

(B) Rheumatoid arthritis patients on treatment

(C) AIDS patients

(D) Haematological malignancies

32. Immune complex deposition is seen as complication of which type of malaria :

(A) **Plasmodium vivax**

(B) **Plasmodium falciparum**

(C) **Plasmodium knowlesi**

(D) **Plasmodium malariae**

33. Which of the following is a leading vaccine candidate in malaria ?

(A) **P. falciparum** HP12

(B) **P. falciparum** MRA 6

(C) **P. falciparum** MSP 119

(D) **P. falciparum** HSP12

34. **Entamoeba histolytica** used the following for adherence and cytolysis :

(A) HSPc 8

(B) GalNAc

(C) TNF alpha

(D) GalANc

35. Autoinfection is seen in all except :

(A) **Strongyloides stercoralis**

(B) **Hymenolepis nana**

(C) **Cryptosporidium** sepcies

(D) **Paragonimus westermani**

36. Which one of the following is a coccidian parasite ?
    (A) **Sarcocystis hominis**
    (B) **Enterocytozoon bieneusi**
    (C) **Encephalitozoon cuniculi**
    (D) Brachiola spp.

37. **Toxoplasma gondii** has :
    (A) One infectious stage
    (B) Two infectious stages
    (C) Three infectious stages
    (D) Four infectious stages

38. **Giardia lamblia** causes :
    (A) Traveller's diarrhea
    (B) Bloody diarrhea
    (C) Pea soup diarrhea
    (D) Watery diarrhea

39. **Plasmodium falciparum** malaria shows which of the following complication ?
    (A) Fascitis
    (B) Diarrhea without liver involvement
    (C) Joint swelling
    (D) Paraparesis

40. Which of these parasites infections RBCs of all stages ?
    (A) **Plasmodium vivax**
    (B) **Plasmodium knowlesi**
    (C) **Plasmodium falciparum**
    (D) **Plasmodium ovale**

41. Exflagellation of Plasmodium spp. is seen in which of the following ?
    (A) Macrogametes
    (B) Pre-gametes
    (C) Microgametes
    (D) Post-gametes

42. Xenodiagnosis can be used in :
    (A) **Entomoeba histolytica**
    (B) **Trypanosoma cruzi**
    (C) **Toxoplasma gondi**
    (D) **Trichomonas vaginalis**

43. Egg packets are seen in :
    (A) **Taenia solium**
    (B) **Necator americanus**
    (C) **Diphidium caninum**
    (D) **Enterobius vermicularis**

44. Artefenomal is a novel :
    (A) Antiviral drug
    (B) Antimalarial drug
    (C) Antidiarrhoeal drug
    (D) Antifungal drug

45. Which one of them is a common cloning vector ?
    (A) Mosquito
    (B) Plasmid
    (C) Snail
    (D) Retroviruses

46. All of them are examples of plasmid mediated antibiotic resistance :
    (A) Beta lactams
    (B) Drug resistance in **Mycobacterium tuberculosis**
    (C) Aminoglycosides
    (D) Chloramphenicol

47. Which one of them is not transmitted by ticks ?
    (A) **Francisella tularensis**
    (B) **Rickettsia rickettsii**
    (C) **Rickettsia prowazekii**
    (D) **Ehrlichia chaffeensis**

48. Which one of them is an intracellular pathogen ?
    (A) **Salmonella** Typhi
    (B) **Escherichia coli**
    (C) **Streptococcus pneumoniae**
    (D) Giardia lamblia

49. Which one of them is a characteristic of endotoxin ?
    (A) Polypeptide
    (B) Toxin is released by filtration of bacterial cultures
    (C) Highly antigenic
    (D) Poorly antigenic

50. Haptens are :
    (A) Immunogenic
    (B) Antigenic
    (C) Both immunogenic and antigenic
    (D) Neither immunogenic nor antigenic

51. All are associated with antibodies except :
    (A) Von Behring and Kitasato
    (B) Has 2 identical heavy and 2 identical light chains
    (C) Half life
    (D) Membrane attack complex

52. All are direct agglutination tests except :
    (A) Slide agglutination test
    (B) Tube agglutination test
    (C) Plate aggluatination test
    (D) Heterophile agglutination test

53. Th2 cells can :
    (A) Produce IL4, IL5, IL6 and IL10
    (B) Produce IL 2 and gamma interferon
    (C) Enhances cells mediated immunity
    (D) Can be activated by cytotoxic T lymphocytes

54. Plasma cells :
    (A) Originate from terminally differentiated B cells
    (B) Originate from terminally differentiated T cells
    (C) Secrete only IgG and Ig M
    (D) Secrete only superantigens and have long life span

55. Antigen presenting cells are :
    (A) Macrophages and dendritic cells
    (B) Macrophages and plasma cells
    (C) Dendritic cells and basophils
    (D) Natural killer cells

56. All of these are due to autoantibodies except :

(A) Addison's disease

(B) Goodpasture's syndrome

(C) Myasthenia gravis

(D) Poststreptococcal glomerulonephritis

57. **Escherichia coli** does all the following except :

(A) Can cause urinary tract infection

(B) Can produce gas from glucose

(C) Can utilize citrate

(D) Can produce Shiga toxins

58. All of these are variations of **Salmonella** antigens except :

(A) OH-O variation

(B) V-Y variation

(C) V-W variation

(D) S-R variation

59. All of them are virulence factors of **Salmonella** spp :

(A) Type III secretion systems

(B) Endotoxin

(C) Catalase

(D) Superoxide mutase

60. All of these are members of the family Enterobacteriaceae except :

(A) **Shigella**

(B) **Salmonella**

(C) **Plesiomonas**

(D) **Aeromonas**

61. Drug of choice for Vibrio cholera in adults :

(A) Erythromycin

(B) Doxycycline

(C) Penicillin

(D) Chloramphenicol

62. All are haliphilic vibrios except :

(A) **Vibrio vulnificus**

(B) **Vibrio alginolyticus**

(C) **Vibrio parahaemolyticus**

(D) **Vibrio cholera**

63. Which of these are related to satellitism ?

(A) Used for identification of **Haemophilus parainfluenzae**

(B) Demonstrates factor V is available at an increased concentration

(C) **Staphylococcus aureus** streak is used

(D) Any disc soaked in the required factor can also be used

64. Which one of them is a concentration method used for sputum for tuberculosis ?

(A) Niacin method

(B) Aryl sulphatase method

(C) Petroff's method

(D) Sodium bromide method

65. Which one of them does not have a plasmid DNA ?

(A) **Chlamydia trachomatis**

(B) **Chlamydia pnemoniae**

(C) **Chlamydia psittaci**

(D) None of the above

66. **Chlamydia trachomatis** can grow on :

(A) Blood agar

(B) Modified New York agar

(C) Thayer Martin medium

(D) None of the above

67. Which of the following is true about Chlamydia ?

(A) Elementary body is infective form

(B) Reticulate body is the infective form

(C) Both are infective forms

(D) None of them can acts as infective form

68. Frei's skin test is done for :

(A) **Haemophilus ducreyi**

(B) **Legionella pneumophila**

(C) **Mycobacterium leprae**

(D) **Chlamydia trachomatis**

69. Correct sequence of viral replication is :

(A) Recognition, attachment, penetration, uncoating, biosynthesis, assembly, budding and releases

(B) Recognition, penetration, attachment, uncoating, biosynthesis, budding, assembly and releases

(C) Attachment, recognition, penetration, uncoating, biosynthesis, assembly, budding and releases

(D) Attachment, recognition, penetration, biosynthesis, uncoating, assembly, budding and releases

70. All the following are RNA viruses except :

(A) Parainfluenza virus type I

(B) Rabies virus

(C) Rotavirus

(D) Human papillomavirus

71. Reassortment is seen in all except :

(A) Influenza virus A and B

(B) Reoviridae

(C) Bunyaviridae

(D) Herpes simples virus 1 and 2

72. Measles virus causes cytopathic effect by :

(A) Ballooning

(B) Descrustion of T cells

(C) Inclusion bodies in nucleus

(D) Cell fusion

73. All the following produce intranuclear inclusion bodies except :
(A) Cytomegalovirus
(B) Herpes simplex virus
(C) Rabies virus
(D) Measles virus

74. All the following are used for treatment of Herpes simplex virus except :
(A) Idoxuridine
(B) Trifluorothymidine
(C) Fluorouracil
(D) Ribavirin

75. Which one of them is used for virus isolation ?
(A) ELISA
(B) Cell culture
(C) Haemagglutination inhibition test
(D) Dot blot

76. All the following toxin production are phage mediated except :
(A) **Corynebacterium diphtheriae**
(B) **Clostridium botulinum type C**
(C) **Clostridium botulinum type D**
(D) **Corynebacterium jeikeium**

77. Antigens of rabies virus is :
(A) Protein G
(B) Protein N
(C) Both protein G and N
(D) None of the above

78. Which of the following will be classified as category II ?
(A) Licks on intact skin
(B) Scratches with bleeding
(C) Bites with contamination by saliva
(D) Licks on broken skin

79. All the following are mosquito borne except :
(A) **Kyasanur forest disease**
(B) West Nile virus
(C) Japanese encephalitis
(D) Yellow fever virus

80. All the following are seen in acute Hepatitis B virus infection except :
(A) HBsAg
(B) HBeAg
(C) IgM HBcAb
(D) Anti-HBe

81. What is the source of antigen for third generation ELISA in HIV ?
(A) Synthetic peptides
(B) Recombinant antigen
(C) Cultured virus lysate
(D) Mixture of synthetic peptides and recombinant glyco-peptides

82. In HIV infection, P24 is :
(A) Late marker of infection
(B) Early marker of infection
(C) Peaks during the middle of the incubation period
(D) Marker for response to treatment

83. All the following are prion disease except :

(A) Kuru

(B) Creutzfeldt-Jakob disease

(C) Amyotrophic lateral sclerosis

(D) Progressive multifocal leukoencephalopathy

84. Severe acute respiratory syndrome is caused by :

(A) Retrovirus

(B) Rhabdovirus

(C) Adenovirus

(D) Coronavirus

85. Which of the following are associated with the fungal cell wall except ?

(A) Chitin

(B) Beta glucan

(C) Ergosterol

(D) Peptidoglycan

86. Which of them has non-septate hyphae ?

(A) Basidiomycetes

(B) Zygomycetes

(C) Deuteromycetes

(D) None of the above

87. Which of the following about dimorphic fungi is true except ?

(A) They can exist as mycelial forms at 37°C and as yeast at 25°C

(B) They can exist as mycelial forms at 25°C and as yeast at 37°C

(C) Temperature has no relation to dimorphic fungi

(D) They can show mycelial forms at 25°C

88. Which of them is a fungal toxin ?

(A) Botox

(B) Aflatoxin B

(C) Factor V

(D) Factor X

89. Which of them act by inhibiting cytochrome P-450 dependent enzymes ?

(A) 5-fluoro-cytosine

(B) Terbinafine

(C) Fluconazole

(D) Amorolfine

90. Latex agglutination test is used frequently for :

(A) **Pneumocystis jiroveci**

(B) **Coccidioidis immitis**

(C) **Cryptococcus neoformans**

(D) **Penicillium marneffei**

91. Mannan antigen detection test is used frequently for :

(A) Candidiasis

(B) Sporotrichosis

(C) Penicilliosis

(D) Cryptococcosis

92. Tinea versicolor is caused by :
(A) **Malassezia furfur**
(B) **Aspergillus flavus**
(C) **Cryptococcus neoformans**
(D) **Penicillium marneffei**

93. White piedra :
(A) Caused by Trichosporon beigelli
(B) It mainly affects hair
(C) It forms arthroconidia and blastoconidia
(D) All of them

94. Which of them causes Ectothrix ?
(A) **Trichophyton tonsurans**
(B) **Trichophyton violaceum**
(C) **Trichophyton mentagrophytes**
(D) **Penicillium marneffei**

95. Which of them causes Ectothrix ?
(A) **Trichophyton tonsurans**
(B) **Trichophyton violaceum**
(C) **Trichophyton mentagrophytes**
(D) **Penicillium marneffei**

96. Which of them produces black grains mycetoma ?
(A) **Pseudoallescheria boydii**
(B) **Madurella grisea**
(C) **Nacardia brasiliensis**
(D) **Actinomadura madurae**

97. Phaeohyphomycosis is caused by all except :
(A) **Exophiala jeanselmei**
(B) **Bipolaris specifera**
(C) **Wangiella dermatitidis**
(D) **Penicillium marneffei**

98. Which is not correct ?
(A) **Histoplasma capsulatum** is a dimorphic fungus
(B) Cell mediated immunity is important for host defence against **Histoplasma**
(C) It does not have a capsule
(D) It has only macroconidia

99. Which is true about zygomycosis ?
(A) **Absidia** is a causative agent
(B) They are transmitted by air
(C) They are angioinvasive
(D) All of these

100. Which of them is a method of water analysis ?
(A) Presumptive colony count
(B) Settle plate method
(C) Membrane concentration method
(D) Differential coliform count

101. Slit sampler is used for :
(A) Water sampling
(B) Soil sampling
(C) Food sampling
(D) Air sampling

102. Which of them can be laboratory acquired ?
(A) **Bacillus anthracis**
(B) **Trichophyton violaceum**
(C) **Rickettsia rickettsiae**
(D) **Penicillium marneffei**

103. Category 6 of biomedical waste consist of :

(A) Solid waste contaminated with blood and other body fluids

(B) Waste sharps

(C) Microbiology waste

(D) Animal waste

104. Which is not correct ?

(A) Yellow coloured bags go for incineration / deep burial

(B) Black coloured bags go for secure landfill disposal

(C) Red coloured bags go for incineration

(D) Blue coloured bags go for autoclaving / microwaving and destruction / shredding

105. Which method uses wet heat method over 100°C ?

(A) Incinerator

(B) Autoclave

(C) Boiling

(D) Inspissation

106. Which is not correct ?

(A) Used needles and syringes should be discarded in a disinfectant jar before disposal

(B) Recapping of needles is a must before disposal

(C) Syringe hub should be cut before disposal

(D) Needles should not be burned

107. Which is not a live vaccine ?

(A) BCG vaccine

(B) OPV

(C) MMR

(D) Pertussis vaccine

108. Which is not a toxoid ?

(A) Diphtheria

(B) Tetanus

(C) Rabies

(D) Perussis

109. Which is given at birth ?

(A) DPT

(B) BCG

(C) TT

(D) DT

110. HBsAg consists of :

(A) S, L and M glycoproteins

(B) S, R and L glycoproteins

(C) S, M and R glycoproteins

(D) None of the above

111. Which is not transmitted via blood and body fluids ?

(A) Hepatitis B virus

(B) Hepatitis E virus

(C) Hepatitis C virus

(D) Hepatitis D virus

112. Which are the natural reservoirs of Hendra viruses ?

(A) Asian Pigs

(B) Cows

(C) Pigeons

(D) Fruit bats

113. Human metapneumovirus has a :

(A) Single stranded DNA

(B) Double stranded DNA

(C) Single stranded RNA

(D) Double stranded RNA

114. Which is not a type of vaccine against influenza virus ?

(A) Core virus vaccine

(B) Whole virus vaccine

(C) Split virus vaccine

(D) Live attenuated vaccine

115. Which is not true for antigenic drift ?

(A) Repeated minor antigenic changes

(B) Causes epidemics

(C) Reinfection with drift viruses has lesser avidity compared to new antigens

(D) Helps in natural selection among commonly occurring-variants

116. Disadvantage of inactivated polio vaccine :

(A) Lack of induction of secretory antibodies

(B) Risk of vaccine associated poliomyelitis in vaccine recipients

(C) Cold chain is a must and unstable

(D) Cannot be administered to immunodeficient patients

117. Which is not a selective media ?

(A) Lowerstein-Jensen media

(B) Mannitol salt agar

(C) Xylose lysine desoxycholate agar

(D) Chocholate agar

118. McIntosh-Fildes jar is used for :

(A) To create microaerophilic condition

(B) To create capnophlilic condition

(C) To create more oxygen

(D) To create anaerobic condition

119. Which is transmitted in blood transfusion ?

(A) **Plasmodium vivax**

(B) Hepatitis A virus

(C) Measles virus

(D) **Salmonella** Typhi

120. Stokes method and Kirbey Bauer method are used for :

(A) Toxin testing

(B) Avidity testing

(C) Antibiotic testing

(D) Milk testing

121. Which of them is transmitted transplacentally ?

(A) **Neisseria gonorrhoeae**

(B) Hepatitis B virus

(C) Herpes simplex virus 2

(D) **Listeria monocytogenes**

122. Which one of them exists as dimetic form ?
(A) IgG
(B) IgM
(C) IgA
(D) IgE

123. J chain is seen in :
(A) IgG1
(B) Serum IgA
(C) IGg4
(D) Secretory IgA

124. Which of the following is true ?
(A) Intradermal test is a in vitro test of **C. diphtheriae**
(B) Plate method is an in vivo in vitro method of **C. diphtheriae**
(C) Elek's gel precipitation is an in vitro test of **C. diphtheriae**
(D) Cascade pathway is an in vitro test of **C. diphtheriae**

125. Which groups are frequently responsible for epidemics and outbreaks ?
(A) Groups A, B and C
(B) Groups A, X and Z
(C) Groups X, Y and Z
(D) None of the above

126. Ophthalmia neonatorum is caused by :
(A) **Nisseria meningitides**
(B) Herpes simplex virus 2
(C) **Neisseria gonorrhoeae**
(D) **Chlamydia trachomatis** LGV serovars

127. M protein is seen in :
(A) Streptococcus
(B) Staphylococcus
(C) Neisseria
(D) Salmonella

128. Positive CAMP test is shown by :
(A) **Streptococcus pyogenes**
(B) **Streptococcus agalactiae**
(C) Viridens streptococcus
(D) None of the above

129. Which of the following is not associated with tumourogenesis ?
(A) Cytomegalo virus
(B) Hepatitis B virus
(C) Epstein Barr virus
(D) **Schistosoma haematobium**

130. D antigen in the blood is found on :
(A) Neutrophils
(B) Red blood corpuscles
(C) Monocytes
(D) Eosinophils

131. Universal donor is :
(A) O negative
(B) O positive
(C) AB positive
(D) AB negative

132. Which of the following is not true about erythroblastosis fetalis ?
(A) It is mediated by IgG of the mother
(B) It can be fatal
(C) It is due to Rh positive factor in the mother
(D) Risk increases with the second child compared to the first born

133. Which of the following is responsible for the clinical manifestations of tetanus ?

(A) Tetanolysin

(B) Tetanospasmin

(C) Neurtotoxin

(D) Oxyspasmin

134. All are true about Cephalic tetanus except :

(A) Form of localized tetanus

(B) Injury to head is a factor

(C) Injury to middle ear is a factor

(D) Fifth cranial nerve is most commonly involved

135. Which of the following serogroups of Enteropathogenic Escherichia coli is associated with outbreaks ?

(A) O57

(B) O92

(C) O120

(D) O86

136. The spatula test is used for :

(A) **Clostridium botulinum**

(B) **Clostridium welchi**

(C) **Clostridium difficle**

(D) **Clostridium tetani**

137. Rabbit Ileal loop is used to test :

(A) Heat stable toxin of **Escherichia coli**

(B) Heat labile toxin of **Escherichia coli**

(C) Heat variable toxin of **Escherichia coli**

(D) None of the above

138. Which of the following is true except ?

(A) Type III secretary system is found in **Salmonella** Typhi

(B) It is enocoded by pathogenicity islands

(C) PhoP / PhoQ is receptor

(D) Type III secretory system helps the in uptake of the bacteria into epithelial cells

139. **Salmonella** Typhi selectively attached to :

(A) E cells in the intestine

(B) M cells in the intestine

(C) A cells in the intestine

(D) None of the above

140. Which of the following is true ?

(A) Prophylactic antibiotic therapy is required for all contacts of plague

(B) Prophylactic antibiotic is required for pneumonic plague

(C) Trimethoprim-sulfamethoxazole can be used for prophylaxis of plague

(D) Ertacycline is used for prophylaxis of plague

141. **Yersinia enterocolitica** shows :

(A) Darting motility

(B) Dimorphic motility

(C) Differential motility

(D) Gliding motality

142. Pili of **Pseudomonas aeruginosa** is similar to that of :

(A) **Neisseria gonorrhoeae**

(B) **Neisseria meningitides**

(C) **Escherichia coli**

(D) **Escherichia blattae**

143. Non-encapsulated **Haemophilus influenzae** causes :

(A) Cellutlitis

(B) Meningitis

(C) Otitis media

(D) Epiglottitis

144. Glanders is caused by :

(A) **Yersinia pestis**

(B) **Corynebacterium diphtheriae**

(C) **Burkholderia mallei**

(D) **Clostridium welchi**

145. **Haemophilus influenzae** is divided into 8 biotypes based on :

(A) Indole production, urease activity and ornithine decarboxylase activity

(B) Catalase production, CAMP test and urease activity

(C) Indole production, Urease activity and citrate utilisation

(D) MR-VP reaction, catalase production and indole production

146. Clue cells are seen in infection with :

(A) Lactobacillus

(B) **Neisseria gonorrhoeae**

(C) **Chlamydia trachomatis**

(D) **Gardnerella vaginalis**

147. Rickettsial pox is caused by :

(A) **Rickettsia rickettsiae**

(B) **Rickettsia prowazekii**

(C) **Rickettsia akari**

(D) **Rickettsia typhi**

148. All are true about Q fever except :

(A) Caused **Coxiella burnetii**

(B) It is zoonotic

(C) Cox identified the etiological agent

(D) Burnett identified the etiological agent

149. All are aerial spores except :

(A) Conidiospores

(B) Microcondia

(C) Macrocondia

(D) Chlamydiospores

150. **Cryptococcus neoformans** is :

(A) True yeasts

(B) Yeast like fungi

(C) Fruit bats are its reservoirs

(D) It has a lipopolysccaharide capsule

151. Which is not a part of normal flora of humans ?

(A) Condida

(B) Staphylococcus

(C) Diphtheroids

(D) Aspergillus

152. **Pneumocystis jerovici** pneumonia in HIV positive patients starts with :

(A) CD4 + cells count < 500 / µl

(B) CD4 + cells count < 250 / µl

(C) CD4 + cells count < 200 / µl

(D) CD4 + cells count < 50 / µl

153. Mycoplasma has :

(A) Cell wall

(B) Cell membrane

(C) Doesn't need sterols

(D) Flagella

154. Diene's test is used for identification of :

(A) **Mycoplasma pneumoniae**

(B) **Mycoplasma genitalium**

(C) **Mycoplasma hominis**

(D) **Ureaplasma urealyticum**

155. Which is a receptor of Epsein Barr virus ?

(A) CD4 molecule in helper T cells

(B) ICAM-1 is epithelial cells

(C) C3d complement receptor

(D) Sialic acid in epitheliai cells

156. Which of the following is spherical in shape ?

(A) Ebola virus

(B) Marbung virus

(C) Rubella virus

(D) Dengue virus

157. Which is not true about viroids ?

(A) They are protein free fragments of single stranded circular RNA

(B) Cause disease in plants

(C) Cause disease in human

(D) Resistant to heat and organic solvents

158. Which cell line is a diploid cell strain ?

(A) Rhesus embryo cell strain (HL – 8)

(B) Rhesus monkey kidney cell culture

(C) Vervet monkey cell line

(D) Baby hamster kidney cell line (Vero)

159. Infant / Suckling mice is used for isolation of which virus ?

(A) Coxsackie virus

(B) Rabies virus

(C) Both (A) and (B)

(D) None of the above

160. Which of these most commonly causes paralytic poliomyelit is ?

(A) Poliovirus type 1

(B) Poliovirus type 2

(C) Poliovirus type 3

(D) Poliovirus type 4

161. Which cell lines are used for culture of poliovirus ?

(A) Vero cell lines

(B) McCoy cell lines

(C) Hela

(D) HL-8

162. Influenza virus genome consists of :

(A) RNA dependent DNA polymerase

(B) DNA dependent RNA polymerase

(C) RNA dependent RNA polymerase

(D) DNA dependent DNA polymerase

163. Which are the peplomers of influenza virus ?

(A) Hemagglutinin and Neuraminidase

(B) Hemagglutinin and Neurolysin

(C) Neurolysin and Enterolysin

(D) Neuraminidase and Neurolysin

164. Atypical measles :

(A) Syndrome in which measles infection is seen with immunization with old killed measles vaccine

(B) It's a type of measles which occurs in infants

(C) More common with those vaccinated with attenuated virus vaccine

(D) Associated with very high measles antibody titres but low IgG antibody

165. All the following about Respiratory syncytial virus are true except :

(A) Pleomorphic

(B) Antigenically stable

(C) Subtype B is more virulent then subtype A

(D) Its infection is mostly restricted to the respiratory tract

166. Rotavirus replicate in :

(A) Nucleous of the host cells

(B) Cytoplasm of the host cells

(C) Cell membrane of the host cells

(D) Endoplasmic reticulum of the host cells

167. Human nares are inhabited by which flora ?

(A) Salmonella

(B) Corynebacterium

(C) Streptococcus

(D) Candida

168. **Clostridium perfringens** is detected in water samples by :

(A) Aldehyde test

(B) MacConkey broth

(C) Litmus milk medium

(D) Aldehyde milk medium

169. Which is the common cause of surgical site infections ?

(A) **Klebsiella pneumoniae**

(B) **Staphylococcus aureus**

(C) **Streptococcus pyogenes**

(D) **Clostridium difficile**

170. Which of the following is true ?

(A) **Entamoeba histolutica** can be differentiate from E. dispar microscope only

(B) **E. histolytica** cannot be differentiated from E dispar microscopically

(C) **E. moskowski** can cause severe human infections

(D) Entamoeba is a intracellular pathogen

171. Which is caused by **Campylobacter jejuni** ?

(A) Watery diarrhea

(B) Bloody diarrhea

(C) Bloody diarrhea associated with mucous

(D) Guillian Barre syndrome is never seen with this infection

172. All the following about Helicobacter pylori are true except :

(A) Curved bacteria

(B) Associated achlorhydria

(C) Urease test can be done for its diagnosis

(D) Causes peptic ulcer disease

173. **Haemophilus ducreyi** requires :

(A) Factor V

(B) Facter X

(C) Both factor V and X

(D) None of these

174. Which one of these belongs to the HACEK group of bacteria ?

(A) **Helicobacter pylori**

(B) **Acinetobacter baumanii**

(C) **Cardiobacterium hominis**

(D) **Klebsiella pneumoniae**

175. **Bordetella pertussis** is a :

(A) Strict anaerobe

(B) Strict capnophilic

(C) Strict microaerophilic

(D) Strict aerobe

176. Type 1 pili is seen in :

(A) **Escherichia coli**

(B) **Clostridium tetani**

(C) **Serratia marcescens**

(D) **Acinetobacter baunmanii**

177. Which are the phases of bacterial group curve except ?

(A) Log phase

(B) Intermediary phase

(C) Lag phase

(D) Stationary phase

178. Psychrophiles are :

(A) Bacteria which can grow in low temperature < 0°C

(B) Bacteria which grows at 10°C

(C) Bacteria which requires nitrogen for their growth

(D) Bacteria which requires incubation for their growth

179. Pasteurisation method is sterilization :

(A) At 100°C

(B) Between 100 – 150°C

(C) Less than 100°C

(D) Above 200°C

180. Which is true about balantidium coli ?

(A) Watery diarrhea

(B) Bloody diarrhea

(C) Rice water stool

(D) Guillian Barre syndrome is never seen with this infection

181. Which one of them is sterilized by hot air oven ?

(A) Microbiology media

(B) Glasswares

(C) Catheters

(D) Dressings

182. Which one of them is not used as filter ?

(A) Candle

(B) Asbestos

(C) Membranes

(D) Litmus paper

183. Which one of them is used as control of hot air oven ?

(A) **Bacillus stearothermphilus**

(B) **Clostridium welchii**

(C) **Clostridium tetani**

(D) **Bacillus pumilus**

184. Which is true about Disinfection process ?

(A) Kills all bacteria and spores

(B) Kills all bacteria

(C) Used on all living things

(D) Used on all culture media

185. All of them are related to plasmids except :

(A) F factor

(B) R factor

(C) Col factor

(D) M factor

186. McLeod and McCarthy in 1994 demonstrated :

(A) Transforming principle of DNA

(B) Transforming principle of RNA

(C) Transforming principle of plasmids

(D) Transforming principle of bacteriophage

187. Which one of them is not true about genetic transfer of bacteria ?

(A) Transduction

(B) Transformation

(C) Conjugation

(D) Recombination

188. Which one about bacterial clones is true ?

(A) Carries specified genes

(B) Carries unidentified genes for identification

(C) Identified by polymerization of RNA or DNA

(D) Whole genome has to be inserted

189. Protein M is an important virulence factor of which bacteria ?

(A) **Helicobacter pylori**

(B) **Acinetobacter baumanii**

(C) **Cardiobacterium hominis**

(D) **Staphylococcus aureus**

190. Lyme disease is caused by :

(A) **Borrelia recurrentis**

(B) **Acinetobacter baumanii**

(C) **Borrelia burgorferi**

(D) **Rickettsia prowazekii**

191. Biofilms are formed by all except :

(A) **Candida albicans**

(B) **Staphylococcus aureus**

(C) **Puedomonas aeruginosa**

(D) **Klebsiella pneumoniae**

192. All of them are intracellular except :

(A) **Leishmania** spp.

(B) **Plasmodium** spp.

(C) **Cryptosporidium parvum**

(D) **Giardia lamblia**

193. Which one of these is not a factor influencing innate immunity ?

(A) Age

(B) Nutritional status

(C) Vaccination

(D) Hormonal levels

194. Which one of these is not a mediator of inflammatory response ?

(A) Histamine

(B) Kinins

(C) C-reactive proteins

(D) Norphenephrine

195. MHC Class II molecules :

(A) Present antigen to T helper cells

(B) Helps to mature antigens

(C) Helps to mature antibodies

(D) It is a lipoprotein

196. Allotypes, Isotypes and idiotypes refer to :

(A) Antigens

(B) Immuniglobulins

(C) Complements

(D) Antigen presentation

197. Which one of these is true about IgG ?

(A) Monomeric

(B) It exist only as IgG1, IgG2 and IgG3

(C) Has a short half life

(D) Least abundant immuno-globulin in the serum

198. Bence-Jones protein are :

(A) Kappa light chains

(B) Lamda light chains

(C) Both (A) and (B)

(D) None of the above

199. Megakaryocyte is a precursor of :

(A) Erythrocytes

(B) Platelets

(C) Basophils

(D) Eosinophils

200. Complement participates in :

(A) Type II hypesensivity reaction

(B) Type III hypersensitivity reaction

(C) Both (A) and (B)

(D) None of the above

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