

**COMBINED TECHNICAL SERVICES EXAMINATION
(NON-INTERVIEW POSTS)
COMPUTER BASED TEST
PAPER – II – MICROBIOLOGY (MEDICINE)
(PG DEGREE STANDARD) (CODE: 351)**

1. Which of the following anatomical site/organ is not involved in coccidioidal dissemination?
- (A) Liver ~~(B) Gastrointestinal tract~~
(C) Lungs (D) Synovia
(E) Answer not known
2. An example of Dimorphic fungi
- ~~(A) Histoplasma capsulatum~~ (B) Cryptococcus neoformans
(C) Aspergillus fumigatus (D) Chromoblastomycosis
(E) Answer not known
3. Common mucosal lesions found in bottle fed infants is
- ~~(A) Oral thrush~~ (B) Dermatomycosis
(C) Pityriasis versicolor (D) Mucormycosis
(E) Answer not known
4. Yeast-like form of fungi which divides by fission and not by budding :
- (A) Sporothrix schenckii ~~(B) Penicillium marneffeii~~
(C) Histoplasma capsulatum (D) Blastomyces dermatitidis
(E) Answer not known
5. Amphotericin.B, an antifungal agent, is an :
- ~~(A) amphoteric polyene macrolide~~
(B) azole
(C) echinocandin
(D) antimetabolite
(E) Answer not known

6. Which of the following antifungal agents is fungicidal in its action?
- (A) Imidazoles and triazoles
 - ~~(B)~~ Allylamines and benzylamines
 - (C) Griseofulvin
 - (D) Tolnaftate
 - (E) Answer not known
7. Kodua poisoning is caused by which mycotoxins
- (A) Patulin
 - (B) Ochratoxin A
 - (C) Trichothecene
 - ~~(D)~~ Cyclopiazonic Acid
 - (E) Answer not known
8. Maize is the source of exposure for the following mycotoxins EXCEPT
- (A) Fumonisin
 - (B) Trichothecenes
 - ~~(C)~~ Cyclopiazonic Acid
 - (D) Aflatoxins
 - (E) Answer not known
9. Which of the following mycotoxins can be used in Biological warfare?
- (A) Fumonisin
 - ~~(B)~~ Trichothecenes
 - (C) Ochratoxin
 - (D) Aflatoxins
 - (E) Answer not known

10. In 10% KOH mount, spaghetti and meat ball appearance of fungi is described in :
- (A) Hortaea Werneckii (B) Trichosporon Beigelii
(C) Piedraia Hortae ~~(D) Malassezia Furfur~~
(E) Answer not known
11. Which of the following statements is incorrect for haematoxylin and eosin staining for the diagnosis of fungal infections?
- (A) Tissue response can be demonstrated better than with any other stain
(B) Does not stain many fungi or stain poorly
~~(C) Innate colour of the fungal elements whether phaeoid or not cannot be determined~~
(D) Inadequate to screen for sparse fungal elements
(E) Answer not known
12. The enzyme released from Candida Pseudohyphal tip for tissue invasion, is a
- (A) Hyaluronidase (B) Protease
(C) Peptidases ~~(D) Phospholipase~~
(E) Answer not known
13. Chronic granulomatous subcutaneous mycoses characterized by friable polyps in the nose-mouth and eye, largely reported in India and Srilanka is
- (A) Sporotrichosis ~~(B) Rhinosporidiosis~~
(C) Chromomycosis (D) Botryomycosis
(E) Answer not known

14. Microsporium species usually infect the following.
- | | |
|------------------------------|--------------------------|
| (A) Skin and nails | (B) Nails and hair |
| (C) Skin and hair | (D) Skin, nails and hair |
| (E) Answer not known | |
15. Powdery buff coloured colonies consists of abundant macroconidia is seen in
- | | |
|-------------------------------------|------------------------------|
| (A) Microsporium gypseum | (B) Microsporium audouinii |
| (C) Microsporium canis | (D) Epidermophyton floccosum |
| (E) Answer not known | |
16. Infections of the hair shaft are collectively called as
- | | |
|----------------------|------------------------|
| (A) Tineas | (B) Dermatomycosis |
| (C) Trichosis | (D) Piedras |
| (E) Answer not known | |
17. Tinea Unguium is caused by all of the following EXCEPT
- (A) Trichophyton rubrum
- (B) Trichophyton mentagrophytes
- (C) Epidermophyton floccosum
- ~~(D) Trichophyton verrucosum~~
- (E) Answer not known
18. Which of the following fungi is geophilic?
- | | |
|------------------------------|-------------------------------------|
| (A) Trichophyton rubrum | (B) Trichophyton audouinii |
| (C) Epidermophyton floccosum | (D) Microsporium gypseum |
| (E) Answer not known | |

19. The actinomycete that possess acid-fast filaments are :
- (A) Actinomadura madurae (B) Actinomadura pelletieri
 (C) Nocardia brasiliensis (D) Streptomyces somaliensis
(E) Answer not known
20. Black Piedra is caused by
- (A) Malassezia furfur (B) Hortaea werneckii
 (C) Piedraia hortae (D) Trichosporon asteroides
(E) Answer not known
21. The following is a screening test for diagnosis of urinary tract infection
- (A) Oxidase test (B) Heat test
 (C) Gneiss nitrate test (D) Loop test
(E) Answer not known
22. Specific tests for syphilis is
- (A) VDRL (B) RPR
 (C) TPHA (D) Microscopy
(E) Answer not known

23. Match correctly the sexually transmitted infections with their etiological agents.

- | | |
|-------------------------|----------------------------|
| (a) Syphilis | 1. Human papilloma virus |
| (b) Condyloma acuminata | 2. Treponema pallidum |
| (c) Chancroid | 3. Klebsiella granulomatis |
| (d) Donovanosis | 4. Hemophilus ducreyi |

- | | (a) | (b) | (c) | (d) |
|----------------|------------------|-----|-----|-----|
| (A) | 2 | 1 | 4 | 3 |
| (B) | 1 | 2 | 4 | 3 |
| (C) | 4 | 1 | 2 | 3 |
| (D) | 3 | 4 | 2 | 1 |
| (E) | Answer not known | | | |

24. Hemolytic uremic syndrome is caused by

- | | |
|-----------------------------|---|
| (A) Enteroinvasive E.Coli | (B) Enterotoxigenic E.Coli |
| (C) Enteropathogenic E.Coli | (D) Enterohemorrhagic E.Coli |
| (E) | Answer not known |

25. Incubation period in staphylococcal food poisoning is

- | | |
|-----------------------------|--------------------|
| (A) 2 to 6 hours | (B) 6 to 12 hours |
| (C) 2 to 8 hours | (D) 10 to 12 hours |
| (E) | Answer not known |

26. 'Epidemic jaundice' is an acute infectious disease caused by

- | | |
|----------------------------|------------------|
| (A) Hepatitis A | (B) Hepatitis B |
| (C) Hepatitis D | (D) Hepatitis E |
| (E) | Answer not known |

27. Which one of the following infection spread by taking raw egg and poultry items?
- (A) Salmonella species
 - (B) Campylobacter jejuni
 - (C) Shigella species
 - (D) Eterohemorrhagic esche richia coli
 - (E) Answer not known
28. Most common virus causing aseptic meningitis
- (A) Herpes virus
 - (B) Adenovirus
 - (C) Enteroviruses
 - (D) Myxoviruses
 - (E) Answer not known
29. Mycoplasma pneumoniae is detected by
- (A) Heat test
 - (B) Breath test
 - (C) Cold agglutination test
 - (D) Culture
 - (E) Answer not known
30. The protozoa which produces granulomatous encephalitis is
- (A) Naegleria
 - (B) Acanthamoeba
 - (C) Trypanosomes
 - (D) Plasmodium
 - (E) Answer not known
31. Japanese encephalitis is a auto viral infection for which the vector is
- (A) Anopheles mosquito
 - (B) Culex mosquito
 - (C) Aedes mosquito
 - (D) Mansonia mosquito
 - (E) Answer not known

32. The following are the agents causing chronic bacterial meningitis except
- (A) *Mycobacterium tuberculosis* (B) *Tropheryma whipplei*
(C) *Borrelia burgdorferi* ~~(D)~~ *Streptococcus pneumoniae*
(E) Answer not known
33. Normal flora of conjunctiva is
- (A) *C. diphtheriae* ~~(B)~~ *C. Xerosis*
(C) *Cl. tetani* (D) *Cl. botulinum*
(E) Answer not known
34. Most common cause of subacute bacterial endocarditis
- (A) Enterococci ~~(B)~~ Viridans Streptococci
(C) *Staphylococcus epidermidis* (D) *Streptococcus pneumoniae*
(E) Answer not known
35. All of the following parasitic organisms can cause ocular infections except
- (A) *Acanthamoeba* (B) *Leishmania donovani*
(C) *Onchocerca volvulus* ~~(D)~~ *Enterobius vermicularis*
(E) Answer not known
36. Which one of the following agent is responsible for most common cause of Acute Otitis externa?
- ~~(A)~~ *Staphylococcus aureus* (B) *Streptococcus pyogenes*
(C) *Pseudomonas* (D) *Streptococcus pneumoniae*
(E) Answer not known

37. Frei's test is used to detect

- (A) LGV
(B) Syphilis
(C) Gonorrhoea
(D) Leptospirosis
(E) Answer not known

38. Bacterial endotoxin is detected by

- (A) String test
(B) Limulus lysate test
(C) Coagulase test
(D) Catalase test
(E) Answer not known

39. Which of the following statements are true about fetal varicella infection?

- (i) Infection is transmitted by mother during early pregnancy.
(ii) Hutchinson triad may be present.
(iii) It is caused by herpes zoster.
- (A) (i) only
(B) (ii) and (iii) only
 (C) (i) and (iii) only
(D) (i) and (ii) only
(E) Answer not known

40. Which one of the following is the Late manifestation of congenital syphilis?

- (A) Hepatosplenomegaly
(B) Bone changes
 (C) Interstitial keratitis
(D) Rhinitis
(E) Answer not known

41. All of the following are Coccidian parasites except
- (A) Isospora (B) Cryptosporidium
(C) Toxoplasma ~~(D) Leishmania~~
(E) Answer not known
42. Vector for Babesiosis, is
- ~~(A) Tick~~ (B) Mosquito
(C) Sand fly (D) Black fly
(E) Answer not known
43. Malignant tertian Malaria is caused by
- (A) Plasmodium Vivax ~~(B) Plasmodium Falciparum~~
(C) Plasmodium Malariae (D) Plasmodium Ovale
(E) Answer not known
44. National Institute of Health (NIH) is located in
- ~~(A) U.S.A~~ (B) U.K
(C) India (D) Australia
(E) Answer not known
45. Causative agent of Kala-azar is
- (A) Trypanosoma brucei (B) Trypanosoma cruzi
~~(C) Leishmania donovani~~ (D) Leishmania braziliensis
(E) Answer not known

46. Cerebral malaria is a complication of
- (A) *Plasmodium vivax* (B) *Plasmodium ovale*
~~(C)~~ *Plasmodium falciparum* (D) *Plasmodium malariae*
(E) Answer not known
47. Which one of the following amoeba exists only in the trophic phase?
- (A) *Embadoomonas intestinalis* (B) *Enteromonas hominis*
~~(C)~~ *Dientamoeba* (D) *Trichomonas vaginalis*
(E) Answer not known
48. Old World Cutaneous Leishmaniasis (OWCL) is caused by
- (1) *Leishmania major*
(2) *Leishmania peruviana*
(3) *Leishmania aethiopica*
(4) *Leishmania braziliensis*
- (A) (1) and (4) (B) (1) and (2)
~~(C)~~ (1) and (3) (D) (3), (4) and (2)
(E) Answer not known
49. The gambiense strain of *Trypanosoma brucei* is transmitted by
- ~~(A)~~ *Glossina palpalis* (B) Reduviid bug
(C) *Culex fatigans* (D) *Glossina morsitans*
(E) Answer not known

50. Which one of the following media is needed for Leishmanial Parasite cultivation?
- (A) Ringer's solution ~~(B)~~ N N N medium
(C) Tyrode's medium (D) Citrated human blood
(E) Answer not known
51. Eggs of the following organisms do not float in saturated salt solution, except
- (A) Eggs of Taenia Saginata
(B) Eggs of Taenia Solium
(C) Unfertilised eggs of Ascaris Lumbricoides
~~(D)~~ Eggs of Trichuris Trichiura
(E) Answer not known
52. Clay pipe-stem cirrhosis is caused by
- (A) Schistosoma haematobium (B) Fasciolopsis buski
(C) Schistosoma mansoni ~~(D)~~ Schistosoma japonicum
(E) Answer not known
53. Which one of the following is called dwarf-tape worm?
- (A) Hymenolepis diminuta (B) Multiceps multiceps
(C) Dipylidium caninum ~~(D)~~ Hymenolepis nana
(E) Answer not known
54. Which one of the following is called rat tape worm?
- (A) Dipylidium caninum (B) Hymenolepis nana
~~(C)~~ Hymenolepis diminuta (D) Diphylobothrium latum
(E) Answer not known

55. Non bile stained egg is present in
- (A) Fertilised egg of Ascaris
 - (B) Unfertilised egg of Ascaris
 - (C) Egg of Enterobius Vermicularis
 - (D) Egg of Trichuris trichiura
 - (E) Answer not known
56. All of the following microfilaria are present in blood except,
- (A) Microfilaria bancrofti
 - (B) Microfilaria streptocerca
 - (C) Microfilaria ozzardi
 - (D) Microfilaria timorie
 - (E) Answer not known
57. Man is the definitive host for all the following parasites except,
- (A) Taenia solium
 - (B) Taenia saginata
 - (C) Echinococcus granulosus
 - (D) Enterobius vermicularis
 - (E) Answer not known
58. Lung infection with which of the following parasites resembles pulmonary tuberculosis?
- (A) Entamoeba histolytica
 - (B) Entamoeba coli
 - (C) Papagonimus westermani
 - (D) Schistosoma japonicum
 - (E) Answer not known
59. Operculated eggs giving rise to ciliated larva is seen with the following parasite
- (A) Diphylobothrium latum
 - (B) Echinococcus granulosus
 - (C) Taenia solium
 - (D) Hymenolepis diminuta
 - (E) Answer not known

60. All the following micro filaria are found in the skin, except
- (A) *Mf. Volvulus* (B) *Mf. Streptocerca*
~~(C)~~ *Mf. Perstans* (D) *Mf. Ozzardi*
(E) Answer not known
61. PCR technique can differentiate *klebsiella granulomatis* from other *klebsiella* spp by detecting
- ~~(A)~~ Pho E gene (B) *Kleb E* gene
(C) *Kleb G* gene (D) Pho G gene
(E) Answer not known
62. Gene expert is used for detecting *Mycobacterium tuberculosis* and resistance to
- ~~(A)~~ Rifampicin (B) Isoniazid
(C) Ethambutol (D) Pyrazinamide
(E) Answer not known
63. Enzyme used for primer extension of PCR at 72° C is
- ~~(A)~~ Taq polymerase (B) Isomerase
(C) Nuclease (D) Amylase
(E) Answer not known

64. Which one of the Automated PCR system is completely automated and giving results within 1 hour?
- (A) Bio fire film array
 - (B) Loop mediated isothermal amplification
 - (C) Real time PCR
 - (D) Reverse transcriptase PCR
 - (E) Answer not known
65. Which one of the following reaction emits energy in chemiluminescence?
- (A) Chemical reaction
 - (B) Fluorescent reaction
 - (C) Carbon-di-oxide-emission
 - (D) Radiological reaction
 - (E) Answer not known
66. RT-PCR denotes
- (A) Reverse transcriptase PCR
 - (B) Real time PCR
 - (C) Nested PCR
 - (D) Multiplex PCR
 - (E) Answer not known
67. Which one of the following vaccines is indicated for adult immunization against Diphtheria?
- (A) DT vaccine
 - (B) TT vaccine
 - (C) DPT vaccine
 - (D) Td vaccine
 - (E) Answer not known

68. No vaccines are currently available against,
- | | |
|----------------------|-------------------------|
| (A) Salmonella | (B) Shigella |
| (C) Vibrio | (D) Polio |
| (E) Answer not known | |
69. Give example of protein conjugated vaccine?
- | | |
|-----------------------|-------------------------------------|
| (A) Measles vaccine | (B) Pneumococcal vaccine |
| (C) Pertussis vaccine | (D) Varicella-zoster vaccine |
| (E) Answer not known | |
70. All the following vaccines are example of live-attenuated vaccine, except
- | | |
|----------------------------------|------------------------|
| (A) Varicella-zoster vaccine | (B) Rubella vaccine |
| (C) Pertussis vaccine | (D) Oral Polio vaccine |
| (E) Answer not known | |
71. Inactivated Viro cell culture - derived SA-14-14-2 vaccine is used for
- | | |
|--------------------------------------|---------------------|
| (A) Meningococcal Meningitis | (B) Yellow fever |
| (C) Japanese Encephalitis | (D) West Nile fever |
| (E) Answer not known | |
72. Which of the following is a Polysaccharide Vaccine?
- | |
|-------------------------------------|
| (A) Haemophilus influenza vaccine |
| (B) Pneumococcal vaccine |
| (C) Hepatitis B vaccine |
| (D) Human Papilloma Virus Vaccine |
| (E) Answer not known |

73. During sterility control of medium, the whole batch should be discarded if detected contamination exceeds
- ~~(A)~~ 10 % (B) 6 %
(C) 3 % (D) 2 %
(E) Answer not known
74. Accreditation is also called
- (A) Quality control (B) Quality Assurance
(C) Internal Audit ~~(D)~~ External Audit
(E) Answer not known
75. Erythromycin can be used as a surrogate antibiotic for predicting susceptibility testing for the following antibiotics except
- (A) Azithromycin ~~(B)~~ Clindamycin
(C) Clarithromycin (D) Dirithromycin
(E) Answer not known
76. Which one of the following gene is responsible for Rifampicin resistance in leprosy patients?
- (A) fol P ~~(B)~~ rpo B
(C) gyi A (D) RAM - 2
(E) Answer not known

77. With regard to Fosfomycin – all are true except
- (A) Inactivates the enzyme MurA
 - (B) Active against urinary tract pathogens
 - (C) Active against both gram positive and gram Negative bacteria
 - (D) Resistance has not been reported yet
 - (E) Answer not known
78. Under Bush-Jacoby-Thedeiors classification of β -lactamase enzyme extended spectrum β -lactamase belongs to type
- (A) 2a
 - (B) 2be
 - (C) 2br
 - (D) 2d
 - (E) Answer not known
79. Enterococci is intrinsic resistant to which one of the following drug?
- (A) Polymyxin B
 - (C) Cephalosporins
 - (B) Ampicillin
 - (D) Colistin
 - (E) Answer not known
80. Which of the following mechanism of antimicrobial resistance is not by modification of the target sites?
- (A) Resistance of gram negative bacteria to quinolones
 - (B) Resistance of *M. tuberculosis* to streptomycin
 - (C) Resistance of pneumococci to β lactam antibiotics
 - (D) Resistance of Enterococci to Vancomycin
 - (E) Answer not known

81. EAC rosettes are formed by
(A) T cells
(C) Manophages
(E) Answer not known
~~(B)~~ B cells
(D) Monocytes
82. The 'Network' hypothesis to explain the mechanism of regulation of antibody response was postulated by
(A) Burnet
(C) Mudd
(E) Answer not known
~~(B)~~ Jerue
(D) Fenner
83. Inter Levkin 1 (IL_1) is also known as
(A) B cell growth Factor
(C) T Cell Growth Factor
(E) Answer not known
~~(B)~~ Endogenous Pyrogen
(D) Integrins
84. The following are CD Markers for T cell except
~~(A)~~ CD 19
(C) CD 4
(E) Answer not known
(B) CD 3
(D) CD 8
85. According to Eichwald - Silmsner effect, the rejection risk is greater if graft is transferred
~~(A)~~ From a male donor to a female recipient
(B) From a female donor to a male recipient
(C) From a male donor to a male recipient
(D) From a female donor to a female recipient
(E) Answer not known

86. A graft taken from an individual and placed on another individual of the same genetic constitution is called as
- (A) Autograft
 - ~~(B)~~ Isograft
 - (C) Xenograft
 - (D) Allograft
 - (E) Answer not known
87. Syngeneic Grafts are Grafts from
- ~~(A)~~ Monozygotic twins
 - (B) The same Individual
 - (C) Intra uterine fetus
 - (D) From an Animal of Different species
 - (E) Answer not known
88. Monoclonal antibodies approved for treatment of Breast Cancer is
- (A) Alemtuzumab
 - (B) Bevacizumab
 - ~~(C)~~ Trastuzumab
 - (D) Cetuximab
 - (E) Answer not known
89. The following disease is due to disorder of phagocytosis
- ~~(A)~~ Tobs syndrome
 - (B) Thymic hypoplasia
 - (C) Trans cobalamin deficiency
 - (D) Ataxia telangiectaria
 - (E) Answer not known

90. Purine Nucleoside phosphorylase deficiency is due to
- (A) Humoral Immunodeficiency
 - (B) Cellular Immunodeficiency
 - (C) Combined Immunodeficiency
 - (D) Disorders of phagocytosis
 - (E) Answer not known
91. One of the following is true about BCG Vaccine
- (A) Killed Vaccine
 - (B) Live Attenuated Vaccine
 - (C) Toxoid Vaccine
 - (D) DNA Vaccine
 - (E) Answer not known
92. Passive Immunoglobulin preparation used as post exposure prophylaxis in hematopoietic stem cell and kidney transplant recipients is
- (A) RG ISO immunoglobulin
 - (B) Hepatitis B Immune globulin
 - (C) Cytomegalo virus immune globulin
 - (D) Diphtheria antitoxin
 - (E) Answer not known
93. Membrane bound B cell Receptors are
- (A) Ig A + Ig E
 - (B) Ig M + Ig D
 - (C) Ig G + Ig A
 - (D) Ig G + Ig M
 - (E) Answer not known

94. Which of the following is true of (TSST) Toxic Shock Syndrome Toxin a super antigen?
- (A) CLIP (Class II Invariant Chain Peptide)
 - (B) Tap Protein
 - (C) V_{β} Region of T cell receptor
 - (D) Toll like Receptors
 - (E) Answer not known
95. Oudin procedure is
- (A) Single diffusion in one dimension
 - (B) Double diffusions in one dimension
 - (C) Single diffusion in two dimension
 - (D) Double diffusion in two dimensions
 - (E) Answer not known
96. Paroxysmal Nocturnal Hemoglobinuria (PNH) is due to deficient
- (A) DAF Decay
 - (B) C_1 esterase inhibitor
 - (C) Decay Accelerating factor DAF and CD 59
 - (D) CD 59
 - (E) Answer not known

97. Serum Sickness reaction is characterized by requirement of a
- (A) Single injection as sensitising dose
 - (B) Single injection serves both as sensitising dose and shocking dose
 - (C) Two injections respectively as sensitising and shocking dose
 - (D) Single injection as shocking dose
 - (E) Answer not known
98. All are systemic auto immune diseases except
- (A) Systemic lupus erythematosus
 - (B) Rheumatoid arthritis
 - (C) Addisons disease
 - (D) Polyarteritis nodosa
 - (E) Answer not known
99. In Shwartzman reaction the initial (preparatory) dose is characteristically
- (A) An endotoxin
 - (B) Serum
 - (C) Kaolin
 - (D) Starch
 - (E) Answer not known
100. Serum sickness is a type of hypersensitivity which is described as
- (A) Systemic immune complex disease
 - (B) Localized immune complex disease
 - (C) Allergic reaction
 - (D) Delayed type hypersensitivity reactions
 - (E) Answer not known

101. High Efficiency Particulate Air filters (HEPA) has the following features:

- (1) Used in biosafety cabinets, operation theatres and isolation rooms
 - (2) Removes 99.97% of particles with 0.3 μm size
 - (3) Membrane filters are used in air and water filtration
 - (4) Ultra-low particulate filters are not available
- (A) (1), (2) and (3) are true (B) (2), (3) and (4) are true
(C) (1), (2) and (4) are true (D) (1), (3) and (4) are true
(E) Answer not known

102. Which of the following is correctly paired?

- (1) Floor cleaning – Lysol
 - (2) Mouth wash – Hydrogen peroxide
 - (3) Drinking water – Chlorine
 - (4) Hand rub – Alcohol
- (A) (1) and (2) are correct
 (B) (1), (3) and (4) are correct
(C) (1), (2) and (4) are correct
(D) (2) and (3) are correct
(E) Answer not known

103. Microbe which can survive pasteurisation by holder method is

- (A) *Brucella abortus* (B) *Salmonella typhi*
- (C) *Mycobacterium bovis* (D) *Coxiella burnetti*
- (E) Answer not known

104. For media containing sugars or gelatin an exposure of 100°C for 20 min on 3 successive days is called?

- (A) Pasteurisation (B) Inspissation
~~(C)~~ Tyndallisation (D) Incineration
(E) Answer not known

105. The permanent loss of fluorescence as a result of chemical damage to the fluorochrome is called

- (A) Fluorochroming (B) Quenching
~~(C)~~ Photo bleaching (D) Epifluorescence
(E) Answer not known

106. Which of the following is incorrectly paired?

- (1) Ignaz semmelweis – Hand hygiene
(2) Antonie Van Leeuwen Hoek – Single – lens microscope
(3) Edward Jenner – Vaccine for Anthrax
(4) Louis Pasteur – Fermentation of bacteria
~~(A)~~ (3) is incorrectly paired (B) (4) is incorrectly paired
(C) (2) is incorrectly paired (D) (1) is incorrectly paired
(E) Answer not known

107. The greatest impact in medicine was the development of a vaccine for Rabies by

- (A) Edward Jenner ~~(B)~~ Louis Pasteur
(C) Robert Koch (D) Ignaz Semmelweiss
(E) Answer not known

108. Introduction of antiseptic techniques in surgery was pioneered by

- (A) Joseph Lister (B) Robert Koch
(C) Paul Ehrlich (D) Louis Pasteur
(E) Answer not known

109. Choose the right matches among the following :

- (1) Enriched Media – Loeffler's serum slope
(2) Basal media – Blood agar
(3) Selective media – Potassium tellurite agar
(4) Differential media – Nutrient agar
 (A) (1) and (3) are correct (B) (1) and (2) are correct
(C) (2) and (3) are correct (D) (3) and (4) are correct
(E) Answer not known

110. The following are the biochemical tests done for identification of bacteria, except

- (A) Catalase test (B) Chick – Martin test
(C) Indole test (D) Coagulase test
(E) Answer not known

111. Following bacteria can grow in acidic pH

- (A) *Vibrio cholerae* (B) *Lacto bacilli*
(C) *Pseudomonas aeruginosa* (D) *Klebsiella Sp.*
(E) Answer not known

112. When a liquid medium contains a substance that inhibits all unwanted bacteria but stimulates the growth of particular bacteria it is known as

- (A) Enrichment media (B) Selective media
(C) Differential media (D) Transport media
(E) Answer not known

113. Albert's staining is employed to identify

- (A) *Corynebacterium diphtheriae*
(B) *Mycobacterium tuberculosis*.
(C) *Mycobacterium leprae*
(D) *Pseudomonas Sp.*
(E) Answer not known

114. Type of motility seen in Spirochetes is :

- (1) Flexion – Extension motility
(2) Tumbling motility
(3) Corkscrew motility
(4) Swarming motility
(A) (1) and (2) (B) (2) and (4)
(C) (3) and (4) (D) (1) and (3)
(E) Answer not known

115. Choose the wrong matches:

- (1) Flagella – Motility
- (2) Spore – Cellwall deficient forms
- (3) Fimbriae – Adhesion
- (4) L-Forms – Resting stage
- (A) (2) and (3) are wrong ~~(B)~~ (2) and (4) are wrong
- (C) (1) and (4) are wrong (D) (3) and (4) are wrong
- (E) Answer not known

116. Iodine – acetone is used as a decolouriser in one of the following modifications of Gram Staining of Bacteria

- ~~(A)~~ Preston and Morrell's (B) Weigert's
- (C) Jensen's (D) Kopeloff and Beerman's
- (E) Answer not known

117. The Polymerase Chain Reaction (PCR) was first developed in the year

- (A) 1963 (B) 1973
- ~~(C)~~ 1983 (D) 1993
- (E) Answer not known

118. All the following are substitutions at single nucleotide base pair except

- ~~(A)~~ Transversion (B) Silent mutation
- (C) Neutral mutation (D) Missense mutation
- (E) Answer not known

119. Transient bacteremia occurs during the following actions except

- (A) Chewing
- (B) Dental procedure
- (C) Brushing of teeth
- ~~(D) Bathing~~
- (E) Answer not known

120. Choose the right match from below :

- (1) Northern blot – Used to detect RNA
- (2) Eastern blot – Used to detect proteins
- (3) Western blot – Used to detect lipids
- (4) Southern blot – Used to detect DNA
- ~~(A) (1), (2) and (4) are correct~~
- (B) (1), (2) and (3) are correct
- (C) (2), (3) and (4) are correct
- (D) (2), (3) are correct
- (E) Answer not known

121. Chagas disease is transmitted by

- ~~(A) Reduviid bug~~
- (B) Louse
- (C) Tick
- (D) Mite
- (E) Answer not known

122. The following agents used as bio terrorism agents except

- (A) Anthrax
- ~~(B) Clostridium tetani~~
- (C) Claviceps purpurea
- (D) Plague
- (E) Answer not known

123. Assertion [A] : Multiplex PCR is useful in detecting multiple causative agents.

Reason [R]: It amplifies DNA in samples using single primer that is common for different organisms.

- (A) [A] is true and [R] is true
- (B) [A] is true and [R] is false
- (C) [A] is false and [R] is true
- (D) Both [A] and [R] are false
- (E) Answer not known

124. Regarding the antimicrobial stewardship programme.

The following are the strategies

- (i) Prior authorisation
 - (ii) Reducing the cost to the patient
 - (iii) De-escalation of an antibiotic following empiric therapy
- (A) (i) only (B) (ii) and (iii) only
(C) (i) and (ii) only (D) (i) and (iii) only
(E) Answer not known

125. Which of the following criteria is not correct in defining Catheter – Related Blood Stream Infection (CRBSI)?

- (A) The same pathogen is isolated from a quantitative blood culture drawn through central and peripheral vein
- (B) Differential time to positivity is less than 2 hours
- (C) Colony count is 3 times higher in the sample from central line than in peripheral line
- (D) Sample collected from peripheral Vein grows earlier than a sample from central Vein
- (E) Answer not known

130. Which of the following is fourth generation cephalosporin?

- (A) Cephazolin
- (B) Cefprozil
- (C) Cefmetazole
- ~~(D) Cefepime~~
- (E) Answer not known

131. Find out the correct sequence of doffing of PPEs?

- ~~(A) Glove→Face shield→Gown→Mask~~
- (B) Gown→Glove→Face shield→Mask
- (C) Mask→Gown→Face shield→Gloves
- (D) Gloves→Gown→Mask→Face shield
- (E) Answer not known

132. The following statements are rejection criteria for urine sample collection except,

- (A) Foley catheter tips
- ~~(B) Suprapubic aspiration of urine~~
- (C) Urine collected from catheter bag
- (D) Urine collected in unsterile container
- (E) Answer not known

133. Blood bags should be disposed in to which colour code bag?

- ~~(A) Yellow~~
- (B) Red
- (C) Blue
- (D) Black
- (E) Answer not known

134. Match the following type :

Syndrome of virus		Specimen collected for laboratory diagnosis	
(a) Herpes simplex virus	1.	Serum	
(b) Rotavirus	2.	Nasopharyngeal swab	
(c) Dengue virus	3.	Feces	
(d) Influenza virus	4.	Vesicle fluid	

- | | (a) | (b) | (c) | (d) |
|----------------|------------------|-----|-----|-----|
| (A) | 4 | 3 | 1 | 2 |
| (B) | 4 | 1 | 2 | 3 |
| (C) | 2 | 3 | 1 | 4 |
| (D) | 2 | 1 | 3 | 4 |
| (E) | Answer not known | | | |

135. One of the following media is act as a transport media for streptococcus pyogenes?

- (A) Crystal violet blood agar medium
- ~~(B)~~ Pike's medium
- (C) Chocolate Agar
- (D) Tween-80 Blood agar
- (E) Answer not known

136. To detect the Escherichia oil in water sample, McCrady's probability tables is used in

- (A) Plate count
- (B) Presumptive coliform count
- ~~(C)~~ Differential coliform test
- (D) Membrane filtration method
- (E) Answer not known

137. One of the following organism is responsible for fried rice associated food poisoning?
- (A) *Vibrio cholerae* (B) *Salmonella* species
~~(C)~~ *Bacillus cereus* (D) *Shigella* species
(E) Answer not known
138. In Needle stick Injury, the risk of transmission is highest with which one of the following virus?
- ~~(A)~~ HBV Hepatitis B virus (B) Hepatitis C virus
(C) HIV (D) Malaria
(E) Answer not known
139. Efficacy of pasteurization milk is tested by
- (A) Methylene blue reduction test
~~(B)~~ Phosphatase test
(C) Turbidity test
(D) Eijkman test
(E) Answer not known
140. The following is true about Membrane filtration method of water analysis EXCEPT
- (A) Less labour intensive
(B) Gives direct count of thermotolerant coliforms in water.
~~(C)~~ Turbid water can be tested
(D) More useful in testing dialysis water
(E) Answer not known

141. Indication for 23-valent Pneumococcal Polysaccharide Vaccine (PPV 23) are all EXCEPT
- (A) Age above 65 years
 - (B) Cochlear implants
 - (C) Sickle cell disease
 - ~~(D)~~ Children less than 2 years
 - (E) Answer not known
142. All are true about Community Acquired Methicillin Resistant Staphylococci (CA-MRSA) EXCEPT
- (A) More virulent
 - (B) Express panton valentine toxin
 - ~~(C)~~ Express mec A gene subtype II and III
 - (D) Cause invasive skin and soft tissue infection
 - (E) Answer not known
143. Optochin sensitivity is a characteristic feature of
- ~~(A)~~ Pneumococcus
 - (B) Streptococcus pyogenes
 - (C) Staphylococcus aureus
 - (D) Streptococcus agalactiae
 - (E) Answer not known
144. Positive tuberculin test is indicated by induration of
- (A) 2–4 mm in diameter
 - (B) 6–8 mm in diameter
 - ~~(C)~~ 10 mm or more in diameter
 - (D) Less than 8 mm
 - (E) Answer not known
145. Sun ray appearance is a characteristic feature of
- ~~(A)~~ Actinomyces
 - (B) Nocardia
 - (C) Mycobacteria
 - (D) Chlamydia
 - (E) Answer not known

146. *Shigella shigae* is

- (A) *Shigella dysenteriae* serotype 1
- (B) *Shigella dysenteriae* serotype 2
- (C) *Shigella dysenteriae* serotype 3
- (D) *Shigella dysenteriae* serotype 4
- (E) Answer not known

147. Poached egg colony morphology is seen in which type of diphtheria bacilli

- (A) *Gravis* (B) *Intermedius*
- (C) *Mitis* (D) *Minimus*
- (E) Answer not known

148. All of the following statements are true about Anthrax toxin EXCEPT

- (A) Antibody to protective antigen factor is protective
- (B) Entry of Lethal factor into cell causes cell death
- (C) It is a complex of 10 fractions
- (D) Oedema factor is an adenyl cyclase
- (E) Answer not known

149. International Reference centre for vibrio phage typing in India is located at

- (A) NIV pune
- (B) Moulana Azad Medical College
- (C) AIIMS New Delhi
- (D) National Institute of Cholera and Enteric Disease (NICED) Kolkata
- (E) Answer not known

150. All are true about Melioidons except
- (A) Caused by *Burkholderia pseudomallei*
 - (B) Characterised by normal sputum
 - (C) Caused by *Burkholderia mallei*
 - (D) Vaccine is not available
 - (E) Answer not known
151. Which of the following organism is oxidase negative?
- (A) *Klebsiella pneumoniae*
 - (B) *Vibrio cholerae*
 - (C) *Pseudomonas aeruginosa*
 - (D) *Aeromonas* sp.
 - (E) Answer not known
152. Injectable vaccine for typhoid contains vi polysaccharide antigen, obtained from
- (A) *S. Typhi* strain Ty 1
 - (B) *S. Typhi* strain Ty 2
 - (C) *S. Typhi* strain Ty 3
 - (D) *S. Typhi* strain Ty 4
 - (E) Answer not known
153. Water quality is tested by absence of
- (A) *Yersinia* sp.
 - (B) *Staph. aureus*
 - (C) Coliforms
 - (D) *Step. pyogens*
 - (E) Answer not known
154. *Salmonella* gastroenteritis is most commonly caused by
- (A) *S. typhi*
 - (B) *S. typhimurium*
 - (C) *S. paratyphi* A
 - (D) *S. paratyphi* B
 - (E) Answer not known

155. Louse Borne Relapsing fever caused by

- (A) *Borrelia hermseni* (B) *Borrelia parkeri*
~~(C)~~ *Borrelia recurrentis* (D) *Borrelia turicata*
(E) Answer not known

156. Epidemic typhus fever caused by

- (A) *Salmonella typhi* ~~(B)~~ *Rickettsia prowazekii*
(C) *Rickettsia rickettsii* (D) *Rickettsia conorii*
(E) Answer not known

157. The specific tests for *T. pallidum* are all except

- ~~(A)~~ VDRL
(B) TPI (*T. pallidum* immobilisation test)
(C) TPHA (*T. pallidum* Haemagglutination test)
(D) FIA - ABS (Fluorescent Treponemal Ab Absorption test)
(E) Answer not known

158. Non motile *Salmonella* is

- ~~(A)~~ *Salmonella pullorum* (B) *Salmonella paratyphi A*
(C) *Salmonella typhi* (D) *Salmonella typhimurium*
(E) Answer not known

159. Which of the following helps in the diagnosis of carriers in typhoid?

- (A) Blood ~~(B)~~ Faeces
(C) Urine (D) Pus
(E) Answer not known

160. Strains used for salmonella Antigen preparation is
- (A) S. Typhi 901 'O' and H (B) S. Typhi 904 'O' and H
(C) S. Typhi 109 'O' and H (D) S. Typhi 409 'O' and H
(E) Answer not known
161. Cytopathic effect of cell line in measles is
- (A) Cytoplasmic vacuolations
(B) Nuclear vacuolations
 (C) Syncytium or multinucleated giant cell formation
(D) Crenation of cells
(E) Answer not known
162. Primary cell lines divide maximum upto
- (A) Upto 5–10 divisions (B) Upto 2–4 divisions
(C) Upto 10–20 divisions (D) Upto 15–30 divisions
(E) Answer not known
163. The following viruses belongs to Bunyaviridae family
- (A) Hepatitis B virus and Herpes simplex virus
(B) Corona virus and Rabies virus
 (C) Hanta virus and sandfly fever virus
(D) Mumps virus and measles virus
(E) Answer not known

164. Which of the following viruses belongs to Filoviridae family?
- (A) Echovirus and enterovirus
 - (B) Rhinovirus and poliovirus
 - (C) Varicella zoster virus and cytomegalo virus
 - ~~(D)~~ Marbug virus and Ebola virus
 - (E) Answer not known
165. Number of virions required to produce Macroscopic agglutination with chicken Erythrocytes (0.5 ml of 0.5% suspension)
- (A) 10^6
 - ~~(B)~~ 10^7
 - (C) 10^5
 - (D) 10^8
 - (E) Answer not known
166. The only DNA virus that replicates in the cytoplasm of the host cells is
- (A) Hepatitis B virus
 - ~~(B)~~ Pox virus
 - (C) Herpes virus
 - (D) Parvo virus
 - (E) Answer not known
167. All the following are diploid cell culture except
- (A) W1-38 (Wistar Institute - 38)
 - (B) MRC-5 (Medical Research Council Cell Strain - 5)
 - (C) Human fibroblast cell line
 - ~~(D)~~ Chick embryo cell line
 - (E) Answer not known

168. "Rolling Circle" mechanism of biosynthesis of DNA is seen in
- (A) Adeno viruses (B) Pox viruses
(C) Parvo viruses ~~(D) Herpes viruses~~
(E) Answer not known
169. The mechanism of action of Raltegravir drug used in treatment of HIV-1 infection
- (A) HIV protease inhibitor
(B) Viral polymerase inhibitor
~~(C) Integrase inhibitor~~
(D) Blocking of viral uncoating
(E) Answer not known
170. Which of the following drugs is effective against herpes simplex virus infection?
- ~~(A) Acyclovir~~ (B) Ribavirin
(C) Indinavir (D) Amantadine
(E) Answer not known
171. Which of the following is the matrix protein inhibitor in the treatment of influenza virus infection?
- ~~(A) Amantadine, Rimantadine~~
(B) Dasabuvir, Sofosbuvir
(C) Oseltamivir, Zanamivir
(D) Zanamivir, Sofosbuvir
(E) Answer not known

172. Nakayama strain is used in the preparation of vaccine for

- (A) Yellow fever
- (B) Chikungunya fever
- (C) Dengue haemorrhagic fever
- ~~(D)~~ Japanese B encephalitis
- (E) Answer not known

173. The following are Bacteriophage coded bacterial toxins except

- ~~(A)~~ Botulinum toxin A and E
- (B) Diphtheria toxin
- (C) Cholera toxin
- (D) Verocytotoxin of Enterohemorrhagic E.coli
- (E) Answer not known

174. Which of the following viruses was used for small pox vaccination?

- ~~(A)~~ Vaccinia virus
- (B) Variola virus
- (C) Cow pox virus
- (D) Tanapox virus
- (E) Answer not known

175. Name the virus which causes spastic paralysis in intracerebral inoculation of specimen in suckling mice.

- (A) Coxsackie virus – A
- (B) Adenovirus
- ~~(C)~~ Coxsackie virus - B
- (D) Herpes simplex virus
- (E) Answer not known

176. Which of the following virus infection are transmitted by vector bite?

- (A) Rotavirus, adenovirus
- (B) Dengue virus, chikungunya virus
- (C) Dengue virus, chikungunya virus, yellow fever virus
- (D) Poliovirus, adenovirus
- (E) Answer not known

177. The principal mode of action of interferon

- (A) Protects virus infected cells from cell death
- (B) Present in serum of healthy individuals
- (C) Coats viral particles and blocks their attachment
- (D) Induces synthesis of cellular proteins that inhibit translation or transcription
- (E) Answer not known

178. Match correctly the characteristic cytopathic effect produced by the following viruses :

- | | |
|---------------------------------|------------------|
| (a) Crenation of cells | 1. Adenovirus |
| (b) Syncytium formation | 2. Herpes virus |
| (c) Large granular clumps | 3. Enterovirus |
| (d) Discrete focal degeneration | 4. Measles virus |

- | | (a) | (b) | (c) | (d) |
|---|------------------|-----|-----|-----|
| (A) | 3 | 2 | 1 | 4 |
| (B) | 1 | 4 | 3 | 2 |
| <input checked="" type="checkbox"/> (C) | 3 | 4 | 1 | 2 |
| (D) | 4 | 3 | 2 | 1 |
| (E) | Answer not known | | | |

179. All are true about pegylated IFNs except
- (A) They attain more sustained serum concentrations
 - ~~(B)~~ They are IFN and linked to polymethylene glycol
 - (C) They are slowly absorbed into the system
 - (D) Can be administered therapeutically once a week
 - (E) Answer not known
180. Which type of interferon induces nitric oxide synthetase?
- ~~(A)~~ Interferon γ
 - (B) Interferon α
 - (C) Interferon β
 - (D) Interferon α , β and γ
 - (E) Answer not known
181. Herpangina is caused by
- (A) Coxsackie B virus
 - ~~(B)~~ Coxsackie A virus
 - (C) Enterovirus 70
 - (D) Echoviruses
 - (E) Answer not known
182. Erythema infectiosum is caused by
- (A) Poliovirus
 - ~~(C)~~ Parvovirus
 - (B) Papovavirus
 - (D) Polyoma virus
 - (E) Answer not known

183. The major barrier to the control of rhinovirus upper respiratory infections by immunization is

- (A) The poor local and systemic immune response to these viruses
- ~~(B)~~ The large number of rhinovirus serotypes
- (C) The side effects of the vaccine
- (D) The inability to grow the viruses in cell culture
- (E) Answer not known

184. Molluscum contagiosum virus is characterized by

- (i) Not been transmitted to animals
- (ii) Can be grown in tissue culture
- (iii) Short incubation period
- (iv) Viral DNA resembles vaccinia virus
- ~~(A)~~ (i) and (iv)
- (B) (i) and (iii)
- (C) (ii) only
- (D) (iii) and (ii)
- (E) Answer not known

185. Strain of mumps virus used in the production of mumps vaccine is

- (A) Dakar strain
- ~~(B)~~ Jeryl-Lynn strain
- (C) Paschen strain
- (D) Reiter's strain
- (E) Answer not known

186. Most of the acute pneumonia in children is caused by
- (A) Parainfluenza viruses 11 and 3
 - ~~(B)~~ Parainfluenza viruses 1 and 3
 - (C) Parainfluenza viruses 11 and 13
 - (D) Parainfluenza viruses 1 and 13
 - (E) Answer not known
187. Castleman's disease is caused by
- (A) HHV-6
 - ~~(B)~~ HHV-8
 - (C) HHV-7
 - (D) HSV-1
 - (E) Answer not known
188. Paul Bunnell Test is the standard diagnostic procedure for the diagnosis of
- (A) Herpes simplex type-2
 - (B) Cytomegalovirus
 - ~~(C)~~ Epstein-Barr virus
 - (D) Herpes simplex type-1
 - (E) Answer not known
189. A baby is delivered with CNS defects, ocular defects, renal defects, autonomic system defects & cicatricial skin lesions. Which one of the organism is responsible?
- (A) CMV
 - (B) Rubella
 - (C) Toxoplasma
 - ~~(D)~~ Varicella
 - (E) Answer not known

190. In human herpesvirus 7 (HHV-7) persistent infections are established in
- (A) Salivary glands
 - (B) Lymphocytes
 - (C) Fibroblastoid cells
 - (D) Peripheral blood mononuclear cells
 - (E) Answer not known
191. The only human hepatitis virus that can be cultivated *in vitro* is
- (A) Hepatitis A virus
 - (B) Hepatitis B virus
 - (C) Hepatitis C virus
 - (D) Hepatitis D virus
 - (E) Answer not known
192. Negri bodies are characteristic intra cytoplasmic eosinophilic inclusion bodies seen in
- (A) Reo virus
 - (B) Rabies virus
 - (C) Polyoma virus
 - (D) Polio virus
 - (E) Answer not known
193. Hepatitis due to hepatitis A virus is
- (A) Transmitted by blood transfusion, incubation period is 50-70 days
 - (B) Transmitted by faeco oral route, incubation period is 50-70 days
 - (C) Transmitted by sexual route, incubation period is 50-70 days
 - (D) Transmitted by faeco-oral route, incubation period is 10-50 days
 - (E) Answer not known

194. Rotaviruses and astroviruses share a number of characteristics except

- (A) Multiple serotypes exist
- ~~(B)~~ Live vaccine available
- (C) Can cause gastroenteritis in infants and children
- (D) Fecal oral route of transmission
- (E) Answer not known

195. Rotavirus caused an epidemic in which of the following country?

- (A) Kenya
- (B) Zambia
- (C) Burma
- ~~(D)~~ Brazil
- (E) Answer not known

196. The principal core antigen of HIV virus is

- (A) P₃₁
- (B) P₁₈
- ~~(C)~~ P₂₄
- (D) P₅₁
- (E) Answer not known

197. Substance found in urine which have a predictive value on the progression of HIV disease is

- (A) Albumin
- (B) C-Reactive protein
- ~~(C)~~ Neopterin
- (D) Fibrinogen
- (E) Answer not known

198. A patient presented to OPD with fever for about 4 days with h/o severe myalgia headache, retro bulbar pain, conjunctival injection and pain in the back and limb with maculopapular rash. What is your probable clinical diagnosis?
- (A) Yellow fever
 - (B) Chikungunya
 - (C) Dengue
 - (D) Pontiac fever
 - (E) Answer not known
199. Which of the following statements about dengue virus is not true?
- (A) it is distributed world wide in tropical regions
 - (B) it can cause a severe hemorrhagic fever
 - (C) there is a single antigenic type
 - (D) one form of disease is characterised by increased vascular permeability
 - (E) Answer not known
200. Kyasanur Forest disease is transmitted by
- (A) Mite
 - (B) Louse
 - (C) Tick
 - (D) Mosquito
 - (E) Answer not known
-