

AQI

PROVISIONAL ANSWER KEY [CBRT]

Name of The Post	Assistant Professor, Microbiology, General State Service, Class-1
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Instructions / સૂચના

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

- (1) All the suggestion should be submitted in prescribed format of suggestion sheet Physically.
- (2) Question wise suggestion to be submitted in the prescribed format (Suggestion Sheet) published on the website.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.
- (6) Objection for each question shall be made on separate sheet. Objection for more than one question in single sheet shall not be considered & treated as cancelled.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

- (1) ઉમેદવારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.
- (2) ઉમેદવારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્ર માં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચન ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે જે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીની જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચન ધ્યાનમાં લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચન પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

001. Zoonotic infections affecting humans are all except
(A) Plague (B) Brucellosis
(C) Toxoplasmosis (D) Measles
002. True about Bioweapons category A –
(A) These agents are highest priority pathogens which pose greatest risk to national security.
(B) Result in low mortality
(C) Do not cause social disruption
(D) None of the above
003. Re-emerging infections include
(A) MDRTB & XDRTB (B) MRSA & VRSA
(C) Both (A) and (B) (D) None of the above
004. Agents of food poisoning are all except-
(A) Staphylococcus aureus (B) Vibrio Parahemolyticus
(C) Bacillus Cereus (D) Coxiella Burnetii
005. Which parameter is not included in HAI surveillance?
(A) CA-UTI (catheter associated urinary tract infection)
(B) CLABSI (central line associated blood stream infection)
(C) VAP (ventilator associated pneumonia)
(D) Open wound infection
006. Which of the following is not Oncogenic virus?
(A) Hepatitis B virus (B) Hepatitis C virus
(C) HIV (D) Varicella-zoster virus
007. Hepatitis B vaccine should be given as per which schedule?
(A) 0, 1, 6 days (B) 0, 1, 6 weeks
(C) 0, 1, 6 months (D) 0, 1, 6 years
008. Which of the following is true about prions?
(A) Destroyed by autoclaving at 121°C (B) Long incubation period
(C) Nucleic acid present (D) Immunogenic
009. Morphology of Coronaviruses has all except
(A) Helical symmetry (B) Linear, positive-sense ssRNA
(C) 120-160 nm size (D) Segmented RNA virus
010. During the window period of patient with AIDS, best diagnostic test is:
(A) ELISA (B) Western blot
(C) Rapid test (D) RT-PCR
011. For the treatment of case of class III dog bite, all of the following are correct except:
(A) Give immunoglobulin for passive immunity
(B) Give anti-rabies vaccine
(C) Immediately stitch wound with antibiotic coverage
(D) Immediately wash wound with soap and water
012. Kyasanur Forest disease is transmitted by:
(A) Mite (B) Louse
(C) Tick (D) Mosquito

013. Certificate of Yellow fever vaccination is valid upto
 (A) 10 days (B) 1 year
 (C) 5 years (D) 10 years
014. Not true about Salk vaccine is
 (A) Expensive than OPV (B) Not useful in epidemics
 (C) Contraindicated in low immunity (D) Booster doses are required
015. Which of the following statements concerning antigenic drift in influenza viruses is correct?
 (A) It results in major antigenic changes
 (B) It is exhibited only by Influenza A viruses
 (C) It is due to frame shift mutation in viral genes
 (D) It occurs frequently than antigenic shift
016. Transcription is the:
 (A) Copying of DNA to RNA (B) Changing of DNA to RNA
 (C) Production of a complementary DNA (D) Completion of a protein sequence
017. Why are CLSI-approved ATCC reference strains used for quality control?
 (A) they are reasonably priced
 (B) they are readily available from many laboratory vendors
 (C) they produce reliable results over time
 (D) they can be frozen
018. Which is a form of cold sterilization?
 (A) Infra-red rays (B) Steam sterilization
 (C) Gamma rays (D) UV rays
019. Enrichment broth is used to
 (A) shorten incubation time by providing excess nutrients
 (B) suppress normal flora to allow pathogens to grow
 (C) detect small numbers of anaerobes
 (D) increase the growth of fastidious organisms
020. *Niesseria gonorrhoeae* are capnophilic organisms and require:
 (A) 5%-10% CO₂, 15% O₂ (B) 5%-10% H₂, 0% O₂
 (C) 0.3% CO₂, 21% O₂ (D) 8%-10% CO₂, 5%-10% O₂
021. What is the stain that binds to the nucleic acid of organisms but does not discriminate between gram-positive or gram-negative organisms called?
 (A) Ziehl-Neelsen stain (B) Auramine-rhodamine stain
 (C) Gram stain (D) Acridine orange stain
022. What CO₂ concentration is achieved when using a candle jar?
 (A) 1% (B) 3%
 (C) 6% (D) 9%
023. XLD (xylose-lysine-desoxycholate) agar:
 (A) Inhibits many gram-negative bacilli that are not enteric pathogens
 (B) Inhibits gram-positive organisms
 (C) Contains a phenol red indicator that detects increased acidity from carbohydrate
 (D) All of the above

024. Applications of nucleic acid-based methods:
 (A) Direct detection of microorganisms in patient specimens
 (B) Identification of microorganisms grown in culture
 (C) Characterization of microorganisms beyond Identification
 (D) All of the above
025. The purpose of Citrate utilization test is to identify organisms-
 (A) capable of using sodium citrate as the sole carbon source
 (B) inorganic ammonium salts as the sole nitrogen source
 (C) Both (A) and (B)
 (D) None of the above
026. Nested PCR: It is modification or PCR
 (A) where two rounds of PCR amplification are carried out by using two primers that are targeted against two different DNA sequences of same organism
 (B) uses more than one primer which can detect many DNA sequences of several organisms in one reaction
 (C) both of the above
 (D) none of the above
027. Horizontal transmission of 'R' factor is by:
 (A) Transduction (B) Transformation
 (C) Conjugation (D) Fusion
028. Cholangiocarcinoma is associated with chronic infection of :
 (A) *Paragonimus westermani* (B) *Fasciola hepatica*
 (C) *Clonorchis sinensis* (D) *Schistosoma haematobium*
029. Which of the following protozoa belongs to phylum Sporozoa?
 (A) *Giardia* species (B) *Toxoplasma* species
 (C) *Plasmodium* species (D) *Entamoeba* species
030. Which is not a feature of CSF in primary amoebic meningoencephalitis?
 (A) Purulent (B) Lymphocytic leucocytosis
 (C) High protein (D) Low glucose content
031. Diagnosis of which of the following parasite uses Entero-Test?
 (A) *Cyclospora* species (B) *Entamoeba histolytica*
 (C) *Giardia lamblia* (D) *Dientamoeba fragilis*
032. Vector for leishmaniasis:
 (A) Sandfly (B) Reduviid bugs
 (C) Tsetse fly (D) *Anopheles* mosquito
033. Maurer's dots in red blood cells are seen in infection with:
 (A) *Plasmodium vivax* (B) *Plasmodium falciparum*
 (C) *Plasmodium malariae* (D) *Plasmodium ovale*
034. Most common manifestation of *Toxoplasma gondii* in immunocompetent adult:
 (A) Lymphadenopathy (B) Chorioretinitis
 (C) Myocarditis (D) Eencephalitis

035. The largest protozoa parasitizing human intestine?
 (A) *Trichomonas hominis* (B) *Balantidium coli*
 (C) *Entamoeba coli* (D) *Isospora*
036. Which of the following cestode eggs are NOT bile stained?
 (A) *Hymenolepis nana* (B) *Diphyllobothrium latum*
 (C) *Echinococcus granulosus* (D) *Taenia solium*
037. Humans acquire *Cysticercus cellulosae* infection by all except:
 (A) Ingestion of Contaminated vegetables (B) Autoinfection
 (C) Reverse peristalsis (D) Ingestion of contaminated pig's meat
038. Carcinoma of urinary bladder is associated with which of the following parasites?
 (A) *Schistosoma japonicum* (B) *Schistosoma mansoni*
 (C) *Schistosoma haematobium* (D) *Schistosoma intercalatum*
039. Larva currens is caused by:
 (A) Ascariasis (B) Cutaneous larva migrans
 (C) Strongyloidiasis (D) *Toxocara canis*
040. All of the following nematodes are oviparous EXCEPT:
 (A) Roundworm (B) *Strongyloides*
 (C) Hookworm (D) *Enterobius*
041. Visceral larva migrans is caused by:
 (A) *Ancylostoma duodenale* (B) *Necator americanus*
 (C) *Ancylostoma caninum* (D) *Toxocara canis*
042. True about Anisakiasis is:
 (A) Transmitted by ingestion of larvae found in saltwater fish and squid
 (B) Transmitted by Ingestion of adult worm
 (C) Marine mammals serve as intermediate host
 (D) Transmitted by Ingestion of meat containing eggs
043. Which of the following microfilaria comes to peripheral blood in the day time?
 (A) *Wuchereria bancrofti* (B) *Brugia malayi*
 (C) *Loa loa* (D) *Brugia timori*
044. Which of the following infection is eradicated from India?
 (A) *Wuchereria bancrofti* (B) *Brugia malayi*
 (C) *Dracunculus medinensis* (D) *Ascaris lumbricoides*
045. Flotation technique is useful for detection of:
 (A) Fertilized eggs of *Ascaris lumbricoides* (B) Larva of *Strongyloides*
 (C) *Taenia* eggs (D) Operculated eggs of trematodes
046. Boeck and Drbohlav's medium is used for the cultivation of:
 (A) *Entamoeba histolytica* (B) *Leishmania donovani*
 (C) Malaria parasite (D) Hookworm
047. One of the statement is not correct for PVA (polyvinyl alcohol):
 (A) Difficult to prepare (B) Not good to preserve *Giardia* cyst
 (C) Good for fecal immunoassay kits (D) Contains mercury compounds

048. Rat flea acts as vector for transmission for which of the following parasitic infection:
 (A) *Paragonimus westermani* (B) *Hymenolepis diminuta*
 (C) *Echinococcus granulosus* (D) *Diphyllobothrium latum*
049. The term premunition means-
 (A) Immunity to re-infection lasts only as long as original infection remains active
 (B) Immunity to an infection is lifelong
 (C) Resistance passively transferred to baby from mother
 (D) Immunity developed in large proportion of population
050. Which of the following is an example of heterophile reaction?
 (A) Weil Felix reaction
 (B) Paul-Bunnell test
 (C) Cold agglutinin test in primary atypical pneumonia
 (D) All of the above
051. Hereditary angioneurotic edema is associated with deficiency of
 (A) C3b inactivator (B) C9
 (C) C1 inhibitor (D) Components of classical pathway C1, C2, C4
052. Megakaryocyte is a myeloid progenitor of
 (A) Basophils (B) Erythrocytes
 (C) Platelets (D) Eosinophils
053. Chediak Higashi syndrome is an abnormality of
 (A) Stem cell differentiation (B) Congenital aplasia of thymus
 (C) Defective intracellular killing (D) Defective phagocytosis
054. Main source of Interferon beta is
 (A) Leucocytes (B) Fibroblast
 (C) T cells (D) Macrophages
055. Serum sickness is which type of hypersensitivity reaction?
 (A) IgE type (B) Cytotoxic and Cytolytic
 (C) Immune complex mediated (D) Delayed hypersensitivity
056. All of the following are tumor associated transplant antigens except :
 (A) Prostate specific Antigen (B) Carcinoembryonic antigen
 (C) CA 125 (D) Rituximab
057. Endotoxin acts by:
 (A) Classical pathway (B) Lectin pathway
 (C) Alternative pathway (D) None of the above
058. In Chemiluminescence-linked immunoassay method visible effect is detected by-
 (A) Spectrophotometer (B) Luminometer
 (C) Gamma counter (D) Electron microscope
059. Northern blotting is used for separation of
 (A) DNA (B) RNA
 (C) Protein (D) None of the above

060. Prosodemic diseases refer to
- (A) Disease that spread rapidly
 - (B) Disease that is constantly present in a particular area
 - (C) Disease that spreads to many areas of the world
 - (D) Disease that spreads person to person contact & evolve slowly**
061. *Staphylococcus aureus* causes vomiting in 6-8 hours. The mechanism of action by:
- (A) Stimulation of cAMP
 - (B) Vagal stimulation
 - (C) Stimulation of cGMP
 - (D) Acts through ganglioside GM receptor**
062. Serotyping of *Streptococcus pyogenes* is based on which of the following protein?
- (A) M protein
 - (B) T protein
 - (C) R protein
 - (D) Carbohydrate antigen**
063. Carrom coin appearance of colonies is seen for:
- (A) *S. pyogenes*
 - (B) Viridans streptococci
 - (C) *S. agalactiae*
 - (D) *S. pneumoniae***
064. All of the following are causative agents of NGU (Non gonococcal urethritis) except:
- (A) *Chlamydia trachomatis*
 - (B) *Mycoplasma hominis*
 - (C) *Candida albicans*
 - (D) Meningococci**
065. Metachromat granules diphtheriae can be stained special stains except:
- (A) Neisser's stain
 - (B) Albert's stain
 - (C) Ziehl- Neelsen stain
 - (D) Ponder's stain**
066. A "Malignant pustule" is a term used for:
- (A) An infected malignant melanoma
 - (B) A carbuncle
 - (C) A rapidly spreading rodent ulcer
 - (D) Anthrax of the skin**
067. Characteristic of anaerobic bacteria is:
- (A) Foul smelling discharge
 - (B) Fail to grow in aerobic media
 - (C) Gas in tissue
 - (D) All of the above**
068. Pseudomembranous colitis is caused by?
- (A) *Clostridium perfringens*
 - (B) *Clostridium difficile*
 - (C) *Clostridium tetani*
 - (D) *Clostridium botulinum***
069. Which of the following mycobacteria are microaerophilic?
- (A) *Mycobacterium tuberculosis*
 - (B) *Mycobacterium bovis*
 - (C) *Mycobacterium leprae*
 - (D) None of the above**
070. The generation time of lepra bacilli is:
- (A) 20 minutes
 - (B) 2 hours
 - (C) 20 hours
 - (D) 12-13days**
071. In erysipeloid, the route of infection is:
- (A) Direct inoculation
 - (B) Ingestion
 - (C) Inhalation
 - (D) None of the above**
072. Which of the following actinomycete is acid fast?
- (A) *Streptomyces*
 - (B) *Actinomodura*
 - (C) *Nocardia*
 - (D) *Actinomyces***

073. Phenyl alanine deaminase test is characteristic of which of the following tribes of Enterobacteriaceae:
- (A) Escherichiae (B) Salmonelleae
(C) Yersinieae (D) Proteae
074. Which of the following Shigella species is mannitol non fermenter?
- (A) Shigella sonnei (B) Shigella boydii
(C) Shigella dysenteriae (D) Shigella flexneri
075. Bipolar staining is characteristic of:
- (A) Yersinia pestis (B) Shigella species
(C) Klebsiella oxytoca (D) Proteus mirabilis
076. In a patient with typhoid, diagnosis after 15 days of onset of fever is best done by:
- (A) Blood culture (B) Stool culture
(C) Urine culture (D) Widal test
077. Pathogenesis of V. cholerae involves one of the following second messenger systems:
- (A) cGMP (B) cAMP
(C) Ca²⁺ (D) IP3
078. All of the following Vibrio species are halophilic except:
- (A) V. cholera (B) V. parahaemolyticus
(C) V. alginolyticus (D) V. vulnificus
079. Cause of melioidosis is:
- (A) Burkholderia mallei (B) Burkholderia pseudomallei
(C) Burkholderia cepacia (D) None of the above
080. Ecthyma gangrenosum is caused by:
- (A) Pseudomonas (B) Bordetella
(C) Brucella (D) H. influenzae
081. Which of the following agent of meningitis can grow on chocolate agar but not on blood agar?
- (A) Neisseria meningitidis (B) Haemophilus influenzae
(C) Moraxella catarrhalis (D) Escherichia coli
082. Chancroid, a sexually transmitted disease, which presents as genital ulcer is caused by
- (A) Haemophilus ducreyi (B) Haemophilus aegyptius
(C) Haemophilus haerolyticus (D) Haemophilus aphrophilus
083. Mercury drop appearance on Regan Lowe media is seen in colonies of
- (A) Brucella melitensis (B) Brucella abortus
(C) Bordetella pertussis (D) Bordetella parapertussis
084. Malta fever is also called as:
- (A) Undulant fever (B) Relapsing fever
(C) Hemorrhagic fever (D) Rat bite fever
085. All of the following serological tests would be helpful in the diagnosis of chronic brucellosis except:
- (A) Standard agglutination test (B) Mercaptoethanol test
(C) Complement fixation test (D) ELISA detecting IgG

086. Most sensitive and accurate method of diagnosis of *Helicobacter pylori* is:
 (A) Culture Biopsy (B) Urease test
 (C) Histopathology (D) Urea breath test
087. Most common mode of transmission of *Legionella pneumophila* is:
 (A) Aspiration (B) Insect bite
 (C) Ingestion (D) Blood
088. In Amsel's Criteria, Bacterial vaginosis is diagnosed if following finding is/are present:
 (A) Presence of clue cells
 (B) pH of vaginal discharge more than 4.5
 (C) Accentuation of distinct fishy odor immediately after vaginal secretions is mixed with 10% solution of KOH (Whiff test)
 (D) All of the above
089. Weils disease is caused by:
 (A) *Leptospira interrogans* (B) *Borrelia recurrentis*
 (C) *Treponema carateum* (D) *Treponema pallidum*
090. Bejel is caused by:
 (A) *Borrelia recurrentis* (B) *Treponema endemicum*
 (C) *Trepanema pallidum* (D) *Treponema carateum*
091. Positive tunica reaction is produced by all except:
 (A) *Rickettsia prowazekii* (B) *Rickettsia typhi*
 (C) *Rickettsia conorii* (D) *Rickettsia akari*
092. Weil Felix test-Rickettsial antibodies detected against *Proteus* OX 19, OX2 and OX K antigens, epidemic and endemic typhus is associated with
 (A) Increase in OX 19 antibody (B) Increase in OX 19 and OX 2 antibodies
 (C) Increase in OX K antibody (D) All of the above
093. Chlamydia exists in 2 morphological forms, elementary body & reticulate body. Features of elementary body are all except-
 (A) Extracellular form (B) Metabolically active
 (C) Infectious form (D) Nucleoid is electron dense
094. The most commonly used method for isolation of Chlamydia:
 (A) Culture on artificial media (B) Culture on Vero cell line
 (C) Inoculation into guinea pig (D) Culture on McCoy cell line
095. Mycoplasmas are the smallest microbes capable of free living in the environment and self-replicating on artificial culture media. They have the following characteristics except:
 (A) Pleomorphic (B) Possess gliding motility
 (C) Susceptible to beta lactams (D) Contaminants of cell culture
096. Fried egg colonies are produced by:
 (A) *Bacillus cereus* (B) *Haemophilus influenzae*
 (C) *Neisseria subflava* (D) *Mycoplasma pneumoniae*
097. Brewer's yeast is a common name for-
 (A) *Pichia guilliermondii* (B) *Aspergillus niger*
 (C) *Saccharomyces cerevisiae* (D) *Penicillium notatum*

098. Favic chandeliers are short, multiple branches at end of hypha, resembling reindeer horn. They are seen in
 (A) *Trichophyton schoenleinii* (B) *Trichophyton mentagrophyte*
 (C) *Epidermophyton floccosum* (D) *Trichophyton tonsurans*
099. Mycotic diseases produced by Dimorphic fungi are all except
 (A) Histoplasmosis (B) Blastomycosis
 (C) Sporotrichosis (D) Candidiasis
100. *Exophiala dermatitidis* is new name for
 (A) *Absidia corymbifera* (B) *Acremonium kiliense*
 (C) *Madurella grisea* (D) *Wangiella dermatitidis*
101. Melanin pigment is a surface component virulence factor in this fungal pathogen-
 (A) *Aspergillus flavus* (B) *Cryptococcus neoformans*
 (C) *Rhizopus species* (D) *Coccidioides*
102. Production of pink color on CHROMagar indicates
 (A) *Candida albicans* (B) *Candida krusei*
 (C) *Candida tropicalis* (D) None of the above
103. Skin tests and fungal antigens used are correctly matched in the following, except-
 (A) Dermatophytoses – trichophytin (B) Candidiasis – Candidin
 (C) Histoplasmosis – Histoplasmin (D) Blastomycosis – Caenorhabditin
104. Epidemiological markers used in fungal infection are all, excluding
 (A) Phage typing (B) Serotyping
 (C) Nucleic acid probe (D) Computed tomography
105. Antifungal antibiotic is
 (A) Imidazole (B) Tolnaftate
 (C) Nystatin (D) Itraconazole
106. Selenium sulfide is used in the treatment of-
 (A) Pityriasis versicolor (B) Dandruff
 (C) White piedra (D) All of the above
107. *Malassezia furfur* is new nomenclature for-
 (A) *Malassezia ovalis* (B) *Pityrosporum malassezii*
 (C) *Pityrosporum ovale* (D) All of the above
108. Chromoblastomycosis is caused by
 (A) *Fonsecaea pedrosoi* (B) *Phialophora verrucosa*
 (C) Both of the above (D) None of the above
109. Black piedra is caused by
 (A) *Hortaea werneckii* (B) *Curvularia lunata*
 (C) *Piedraia hortae* (D) *Scytalidium dimidiatum*
110. Hematogenous dissemination seen in which of the following *Trichosporon* species?
 (A) *Trichosporon ovoides* (B) *Trichosporon inkin*
 (C) *Trichosporon cutaneum* (D) *Trichosporon asahii*

111. Following is a geophilic fungi
 (A) *Trichophyton tonsurans* (B) *Microsporum canis*
 (C) *Microsporum persicolor* (D) *Trichophyton nanum*
112. The etiological agent of kerion celsi is/are
 (A) *Trichophyton verrucosum* (B) *Trichophyton mentagrophyte*
 (C) *Microsporum canis* (D) All of the above
113. Coral red color fluorescence is seen under Wood's lamp in
 (A) *Microsporum canis* (B) *Malassezia furfur*
 (C) *Corynebacterium minutissimum* (D) *Trichophyton schoenleinii*
114. Microconidia are absent in
 (A) *Trichophyton* (B) *Microsporum*
 (C) *Epidermophyton* (D) None of the above
115. Causative agent of Actinomycetoma is/are –
 (A) *Streptomyces somaliensis* (B) *Trichophyton mentagrophyte*
 (C) Both of the above (D) None of the above
116. Causative bacteria of Botryomycosis is/are-
 (A) *Staphylococcus aureus* (B) *Pseudomonas aeruginosa*
 (C) *Actinobacillus lignieresii* (D) All of the above
117. Clinical manifestation of Rose Gardener disease is/are
 (A) Lymphocutaneous sporotrichosis (B) Fixed cutaneous sporotrichosis
 (C) Extra cutaneous sporotrichosis (D) All of the above
118. Chromoblastomycosis is described by presence of
 (A) Sclerotic bodies (B) Negri bodies
 (C) Aster bodies (D) None of the above
119. All are yeast or yeast like fungi except:
 (A) *Candida* (B) *Geotrichum*
 (C) *Cryptococcus* (D) *Trichophyton*
120. Organism that does not cause onychomycosis:
 (A) *Trichophyton* (B) *Epidermophyton*
 (C) *Microsporum* (D) *Candida albicans*
121. A patient coming from sub-Himalayan hilly area, presents with multiple skin lesions. Microscopy reveals cigar shaped yeast cells and asteroid bodies. Microscopy of culture shows 'flower like' pattern. Identify the agent.
 (A) *Candida* (B) *Sporothrix schenckii*
 (C) *Epidermophyton floccosum* (D) *Rhizopus*
122. Germ tube test is diagnostic for:
 (A) *Candida glabrata* (B) *Candida albicans*
 (C) *Cryptococcus neoformans* (D) *Coccidioides immitis*
123. Example for fungus having branching, aseptate hyphae are all except:
 (A) *Rhizopus* (B) *Absidia*
 (C) *Penicillium* (D) *Mucor*

124. Most common fungus causing orbital cellulitis in a patient with diabetic ketoacidosis is:
 (A) Mucor (B) Aspergillus
 (C) Candida (D) Cryptococcus
125. Which one of the following antifungal drugs does not target the biosynthesis of ergosterol in the fungal membrane?
 (A) Voriconazole (B) Itraconazole
 (C) Micafungin (D) Terbinafine
126. Which one of the following pathogenic yeasts is not a common member of normal human flora or microbiota?
 (A) Candida tropicalis (B) Malassezia globosa
 (C) Cryptococcus neoformans (D) Candida glabrata
127. Which statement regarding fungi is correct?
 (A) All fungi are able to molds
 (B) Although fungi are eukaryotes, they lack mitochondria.
 (C) Fungi are photosynthetic
 (D) Fungi have one or more nuclei & chromosomes
128. The potassium hydroxide examination of sputum from a heart transplant patient with fever and pulmonary infiltrates contains oval budding yeast cells and pseudohyphae. What is the diagnostic significance?
 (A) Aspergillosis (B) Candidiasis
 (C) Hyalohyphomycosis (D) No diagnostic significance
129. A 24 year old, HIV negative migrant worker from Columbia presented with a painful ulcerative lesion on the tongue. The edge of the lesion was gently scraped and a calcofluor white- potassium hydroxide smear revealed tissue cells, debris and several large, spherical, multiply budding yeast cells. Based on this observation, what is the most likely diagnosis?
 (A) Blastomycosis (B) Candidiasis
 (C) Histoplasmosis (D) Paracoccidioidomycosis
130. Replication of which of the following requires physical integration with a bacterial replicon?
 (A) Single-stranded DNA bacteriophage (B) Single-stranded RNA bacteriophage
 (C) Plasmid (D) Transposon
131. What is a characteristic of the adaptive immune response and not of innate response?
 (A) Physical barriers (B) Clonal expansion of effector cells
 (C) Inflammatory mediators (D) Phagocytosis
132. Which class of antibody has the ability to cross placenta?
 (A) IgG (B) IgA
 (C) IgM (D) IgD
133. A 2 year old child with recurrent bacterial infections causing otitis media and pneumonia is most likely deficient in
 (A) T cells (B) Phagocytes
 (C) B cells (D) C1 esterase inhibitor
134. Superantigens are peptide toxins released from virulent strains of staphylococcal or streptococcal bacteria. To what entity do these superantigen bind in order to elicit their effect?
 (A) TCR gamma chains (B) TCR beta chain & MHC class II chain complex
 (C) MHC class I molecule (D) Peptide antagonist

135. NK cells express a killer immunoglobulin-like receptor which recognizes:
 (A) MHC class I molecule (B) MHC class II molecule
 (C) Cell adhesion molecule (D) CD40 molecule
136. The first microorganism to satisfy Koch's postulate (in the late 19th century) was
 (A) *Treponema pallidum* (B) *Mycobacterium leprae*
 (C) *Bacillus anthracis* (D) *Neisseria gonorrhoeae*
137. Which of the following is most likely to be associated with the formation of a bacterial biofilm?
 (A) Airway colonization in cystic fibrosis patient with a mucoid strain of *Pseudomonas aeruginosa*
 (B) Urinary tract infection with *Escherichia coli*
 (C) Meningitis with *Neisseria meningitidis*
 (D) Tetanus
138. Which of the following best describes the mechanism of action of diphtheria toxin?
 (A) Forms pores in red blood cells causing hemolysis
 (B) Degrades lecithin in eukaryotic cell membranes
 (C) Inhibits elongation factor 2
 (D) Causes increased adenylate cyclase activity
139. Which of the following statement is correct?
 (A) Lipopolysaccharide is a part of cell wall of *Escherichia coli*
 (B) Cholera toxin is attached to the flagella of *Vibrio cholera*
 (C) The lecithinase of *Clostridium perfringens* causes diarrhea
 (D) Toxic shock syndrome toxin I is produced by strains of *Staphylococcus epidermidis*
140. Which one of the following microorganisms can be a part of normal vaginal flora and cause meningitis in newborns?
 (A) *Candida albicans* (B) *Corynebacterium* species
 (C) *Staphylococcus epidermidis* (D) Group B streptococcus
141. Anaerobic bacteria such as *Bacteroides fragilis* occur in the sigmoid colon in a concentration of about 10¹¹/g of stool. At what concentration do facultative organisms such as *Escherichia coli* occur?
 (A) 10¹¹/g (B) 10¹⁰/g
 (C) 10⁹/g (D) 10⁷/g
142. Dental plaque and periodontal disease can be thought of as a continuum of what type of physiological process?
 (A) Biofilm formation (B) Normal aging
 (C) Exaggerated immune response (D) Abnormal digestion
143. All of the following statement regarding *Clostridium perfringens* are correct except:
 (A) It produces an enterotoxin
 (B) It produces double zone of beta hemolysis when grown on blood agar
 (C) It can cause intravascular hemolysis
 (D) It is most common cause of antibiotic associated diarrhea
144. Movement of *Listeria monocytogenes* inside host cells is caused by
 (A) Inducing host cell actin polymerization (B) The formation of pili on the *Listeriae* surface
 (C) Tumbling motility (D) The motion of *Listeria* flagella

145. A group of six children under 8 years of age live in semitropical country. Each of the children has several crusted weeping skin lesions of impetigo. The lesions are predominantly on arms and faces. Which of the following microorganisms is a likely cause of the lesions?
- (A) *Escherichia coli* (B) *Chlamydia trachomatis*
 (C) *Staphylococcus aureus* (D) *Streptococcus pneumoniae*
146. Which of the following genera are typically resistant to vancomycin?
- (A) *Aerococcus* (B) *Pediococcus*
 (C) *Streptococcus* (D) *Abiotrophia*
147. Enterococci can be distinguished from non enterococcal Group D streptococci on the basis of which of the following characteristics?
- (A) Gamma hemolysis (B) Esculin hydrolysis
 (C) Growth in 6.5% NaCl (D) Growth in presence of bile
148. Which of the following individual should routinely receive vaccination with the conjugate meningococcal vaccine?
- (A) A healthy young adolescent entering high school
 (B) A healthy child entering kindergarten
 (C) A 60 year old man with insulin dependent diabetes
 (D) A 65 year old woman with coronary artery disease
149. The definition of extensively drug resistant (XDR) tuberculosis includes :
- (A) Resistance to isoniazid and rifampin
 (B) Resistance to fluoroquinolone
 (C) Resistance to capreomycin, amikacin and kanamycin
 (D) Resistance to all of the above
150. Which of the following organism principally infects liver and kidney?
- (A) *Streptobacillus moniliformis* (B) *Leptospira interrogans*
 (C) *Enterococcus faecalis* (D) *Treponema pallidum*
151. Which of the following carbapenem antibiotics has no activity against *Pseudomonas aeruginosa*?
- (A) Imipenem (B) Meropenem
 (C) Doripenem (D) Ertapenem
152. All of the following are common mechanisms of resistance to penicillins except:
- (A) Production of beta lactamase (B) Alterations in target receptors (PBP)
 (C) Inability to activate autolytic enzymes (D) Methylation of ribosomal RNA
153. Which one of the following can be used to quantitate the infectious titer of virus?
- (A) Plaque assay (B) Electron microscopy
 (C) Haemagglutination (D) Enzyme immunoassay
154. Laboratory infections can be acquired when working with viruses unless good laboratory safety practices are followed. Which of the following is not a good biosafety practice?
- (A) Use of aseptic techniques
 (B) No pipetting by mouth
 (C) Flushing experimental waste down laboratory sink
 (D) No eating or drinking in the laboratory

155. Human bocavirus is a parvovirus. It has been detected most frequently in which type of sample?
 (A) Urine (B) Cord blood
 (C) Respiratory secretions (D) Fetal liver
156. Which of the following events led to reappearance of acute respiratory disease outbreak among U.S military recruits in the late 1990s?
 (A) Emergence of a new virulent strain of adenovirus
 (B) Cessation of adenovirus vaccination program for recruits
 (C) Change in military housing & training conditions for recruits
 (D) Cessation of antiviral adenovirus drug therapy program for recruits
157. Which one of the following is a recommended therapy for HSV genital infection?
 (A) Acyclovir (B) Herpes immune globulin
 (C) Interferon alpha (D) Ribavirin
158. Which of the following pox infects only humans ?
 (A) Monkeypox (B) Molluscum contagiosum
 (C) Tanapox (D) Yaba tumor virus
159. Which of the following properties of enteroviruses is not shared by rhinoviruses?
 (A) Single stranded RNA genome (B) Resistance to lipid solvent
 (C) Stability at acid pH (pH 3.0) (D) Icosahedral symmetry
160. Rabies virus is rapidly destroyed by
 (A) Ultraviolet radiation (B) Heating at 56°C for 1 hour
 (C) Ether treatment (D) All of the above
161. Which of the following statement is true?
 (A) Zika virus disease is transmitted by bite of Aedes mosquito
 (B) Zika virus disease can be transmitted sexually
 (C) Zika virus can be transmitted from pregnant mother to foetus
 (D) All of the above
162. What is the acceptable limit of bacterial count in air in operation theatre?
 (A) 50 per cubic feet (B) 10 per cubic feet
 (C) 4 per cubic feet (D) 1 per cubic feet
163. Drinking water is considered satisfactory if the presumptive coliform count of water is:
 (A) 0/100mL (B) 1-3/100mL
 (C) 4-10/100mL (D) >10/100mL
164. Minimum inhibitory concentration of an antibiotic can be detected by:
 (A) Broth dilution method (B) Epsilometer test
 (C) Both of the above (D) None of the above
165. At what age first dose of Vitamin A is given?
 (A) 6 weeks (B) 6 months
 (C) 7 months (D) 9 months
166. Specific immunoglobulins are available for passive immunization against:
 (A) Tetanus (B) Hepatitis B infection
 (C) Rabies (D) All of the above

167. Which of the following bacteria can cause infection in hospitalized burn patients?
 (A) *Pseudomonas aeruginosa* (B) *Staphylococcus aureus*
 (C) *Acinetobacter* species (D) All of the above
168. Which of the following organism can cause painless genital infection?
 (A) *Treponema pallidum* (B) *Chlamydia trachomatis*
 (C) *Klebsiella granulomatis* (D) All of the above
169. Which is the commonest etiological agent of endocarditis associated with intravenous drug abusers?
 (A) *Staphylococcus aureus* (B) *Staphylococcus epidermidis*
 (C) *Aspergillus fumigatus* (D) *Streptococcus agalactiae*
170. What is significant bacteriuria?
 (A) Bacterial count > 10⁵ per mL (B) Bacterial count < 10⁴ per mL
 (C) Bacterial count 10⁴ to 10⁵ per mL (D) None of the above
171. Ergot alkaloids are produced by
 (A) *Aspergillus flavus* (B) *Fusarium nivale*
 (C) *Claviceps purpurae* (D) *Penicillium rubrum*
172. Which of the following fungi has not been cultured ?
 (A) *Sporothrix* (B) *Rhinosporidium*
 (C) *Acremonium* (D) *Blastomyces*
173. Who discovered prions?
 (A) Carlton Gajdusek (B) Stanley B Prusiner
 (C) Sigurdsson (D) Karry B Mullis
174. What is the relative risk of transmission of HIV by the sexual contact?
 (A) 0.1-1.0% per exposure (B) 2-20% per exposure
 (C) 30-50% per exposure (D) 50-90% per exposure
175. Subacute sclerosing panencephalitis may occur as complication in:
 (A) Mumps (B) Measles
 (C) Rubella (D) Respiratory syncytial virus
176. Which of the following bacteria requires microaerophilic environment for primary isolation?
 (A) *Mycobacterium tuberculosis* (B) *Mycobacterium bovis*
 (C) Both of the above (D) None of the above
177. The causative agent of Pontiac fever is:
 (A) *Legionella pneumophila* (B) *Yersinia pseudotuberculosis*
 (C) *Pseudomonas putida* (D) *Francisella tularensis*
178. 'Safety pin appearance' on methylene blue staining is characteristic feature of:
 (A) *Yersinia pestis* (B) *Pseudomonas aeruginosa*
 (C) *Burkholderia mallei* (D) *Burkholderia pseudomallei*
179. Which of following bacteria is non-motile?
 (A) *Pseudomonas stutzeri* (B) *Burkholderia mallei*
 (C) *Burkholderia pseudomallei* (D) *Stenotrophomonas maltophilia*

180. Which antibody is responsible for systemic lupus erythematosus?
 (A) Antiplatelet antibodies (B) Antibasement membrane antibodies
 (C) Antinuclear antibodies (D) None of the above
181. Shwartzman reaction is an example of:
 (A) Type I hypersensitivity reaction (B) Type II hypersensitivity reaction
 (C) Type III hypersensitivity reaction (D) None of the above
182. Which of the following HLA types is associated with rheumatoid arthritis?
 (A) HLA-B27 (B) HLA-A1
 (C) HLA-DR4 (D) None of the above
183. Codes of modern medical ethics include
 (A) Hippocratic oath (B) Declaration of Geneva
 (C) Declaration of Tokyo (D) All of the above
184. The Indian Medical Council (amendment) act was passed in
 (A) 1964 (B) 1933
 (C) 1947 (D) 1921
185. Recognition of foreign medical degrees are governed by Indian Medical Council act 1956, under the following section/s
 (A) Section 12 (B) Section 13 (4)
 (C) Both (A) and (B) (D) None of the above
186. All of the following are examples of privileged communication except
 (A) A hotel waiter diagnosed as typhoid carrier
 (B) A barmaid diagnosed of open case of tuberculosis
 (C) A railway engine driver who is colorblind
 (D) Regarding a married women pregnancy as illegitimate and informing to relatives
187. According to doctrine of emergency, a doctor can provide treatment without prior consent from patient who is gravely sick, unconscious or mentally ill, under which section?
 (A) Section 92 of IPC (B) Section 31 of IPC
 (C) Section 104 of IPC (D) Section 40 of IPC
188. Examples of doctrine of res ipsa loquitor in malpraxis are following except
 (A) Mismatched blood transfusion (B) Giving medicine in heavy dose
 (C) Giving injection in wrong site/route (D) Promising 100 per cent cure
189. The existing AIDS law in India consist of
 (A) State amendments and a proposed central bill
 (B) AIDS prevention bill
 (C) Section 4, 7, 5 , 5 (c)
 (D) All of the above
190. Integrationist response to tackle AIDS , proposed by WHO, adopted by US and UK includes 3 specific features , except
 (A) No compulsory testing
 (B) Protecting through confidentiality
 (C) Ensuring nondiscrimination against them
 (D) Mandatory testing

191. Recommended type of personal protective equipment in context of Covid-19 disease for health care worker performing Aerosol generating procedures on Covid-19 patients include all except
 (A) FFP2 mask (B) Gloves and face shield
 (C) Long sleeved water resistant gown (D) Surgical mask
192. Steps involved in convalescent plasma therapy include all , except-
 (A) Blood is collected and run through a machine to separate antibody containing plasma in a process called apheresis
 (B) Convalescent plasma is collected and rest of the blood is returned to donor body
 (C) Convalescent plasma is given to COVID-19 patients through intravenous transfusion to deliver antibodies through blood.
 (D) Plasma can be collected only from healthy individuals who are never exposed to the Covid-19 infection.
193. Death certificate data can be used locally
 (A) to guide disease surveillance (B) quarantine measures
 (C) optimize medical resources (D) all of the above
194. Bacteriophages were discovered by
 (A) d'Herelle (B) W.H Welch
 (C) Kitasato (D) Bruce
195. Barbara McClintoch, Nobel laureate, her contribution in Microbiology is-
 (A) Discovered mobile genetic element (transposon)
 (B) Invented polymerase chain reaction
 (C) Discovered genetic code
 (D) Discovered HLA antigen
196. Resolution power of electron microscope is
 (A) 0.2 mm (B) 0.5mm
 (C) 0.5nm (D) 1mm
197. Generation time of Mycobacterium leprae is-
 (A) 20 minutes (B) 20 days
 (C) 20 hours (D) 20 seconds
198. Lithotrophs are the bacteria that obtain
 (A) Reducing equivalents (electrons)from inorganic compounds
 (B) Reducing equivalents (electrons) from organic compounds
 (C) Obtain energy from light
 (D) Both (A) and (B)
199. Property responsible for bleaching is
 (A) Oxidation (B) Conjugation
 (C) Precipitation (D) Septication
200. All of the following are exotoxins except:
 (A) Botulinum toxin (B) Anthrax toxin
 (C) Diphtheria toxin (D) lipid A portion of lipopolysaccharide