

# BJR(CBRT)

## PROVISIONAL ANSWER KEY

Name of the post Microbiologist (Specialist Service), Class 1,  
Health and Medical Services

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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 19-12-2024; 04:00 PM ONWARDS

### Instructions / સૂચન

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

- (1) All the suggestion should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical or submission through E- Mail of suggestions will not be considered.
- (2) Question wise suggestion to be submitted in the prescribed format (proforma) published on the website / online objection submission system.
- (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 / online objection submission system. 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 should be made on separate sheet. Objection for more than one question in single sheet shall not be considered.

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

- (1) ઉમેદવારે વાંધા-સૂચનો ફક્ત **ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ** દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ, ટપાલ અથવા ઈ-મેઇલ દ્વારા આયોગની કચેરીએ મોકલવામાં આવેલ વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં જેની ખાસ નોંધ લેવી.
- (2) ઉમેદવારે વાંધા-સૂચનો રજૂ કરવા વેબસાઇટ / ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર) ના પ્રશ્નક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે 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 ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચનો પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

Website link for online objection submission system : <http://gpsc.safevaults.in/login/>

001. Cholangiocarcinoma is associated with chronic infection of:  
 (A) *Paragonimus westermani* (B) *Fasciola hepatica*  
 (C) *Clonorchis sinensis* (D) *Schistosoma haematobium*
002. Vector for leishmaniasis:  
 (A) Sandfly (B) Reduviid bugs  
 (C) Tsetse fly (D) *Anopheles* mosquito
003. Maurer's dots in red blood cells are seen in infection with:  
 (A) *Plasmodium vivax* (B) *Plasmodium falciparum*  
 (C) *Plasmodium malariae* (D) *Plasmodium ovale*
004. The largest protozoa parasitizing human intestine?  
 (A) *Trichomonas hominis* (B) *Balantidium coli*  
 (C) *Entamoeba coli* (D) *Isospora*
005. Larva currens is caused by:  
 (A) Ascariasis (B) Cutaneous larva migrans  
 (C) Strongyloidiasis (D) *Toxocara canis*
006. Visceral larva migrans is caused by:  
 (A) *Ancylostoma duodenale* (B) *Necator americanus*  
 (C) *Ancylostoma caninum* (D) *Toxocara canis*
007. Which of the following microfilaria is seen in peripheral blood during day time?  
 (A) *Wuchereria bancrofti* (B) *Brugia malayi*  
 (C) *Loa loa* (D) *Brugia timori*
008. Boeck and Drbohlav's medium is used for the cultivation of:  
 (A) *Entamoeba histolytica* (B) *Leishmania donovani*  
 (C) Malaria parasite (D) Hookworm
009. \_\_\_\_\_ infection is eradicated from India?  
 (A) *Wuchereria bancrofti* (B) *Brugia malayi*  
 (C) *Dracunculus medinensis* (D) *Ascaris lumbricoides*
010. The term premuniton 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
011. Hereditary angioneurotic edema is associated with deficiency of  
 (A) C3b inactivator (B) C9  
 (C) C1 inhibitor (D) Components of classical pathway C1, C2, C4
012. Chediak Higashi syndrome is an abnormality of  
 (A) Stem cell differentiation (B) Congenital aplasia of thymus  
 (C) Defective intracellular killing (D) Defective phagocytosis
013. Endotoxin acts by:  
 (A) Classical pathway (B) Lectin pathway  
 (C) Alternative pathway (D) None

014. Northern blotting is used for separation of  
 (A) DNA (B) RNA  
 (C) Protein (D) None
015. Serotyping of *Streptococcus pyogenes* is based on \_\_\_\_\_  
 (A) M protein (B) T protein  
 (C) R protein (D) Carbohydrate antigen
016. All of the following are causative agents of NGU (Non gonococcal urethritis) EXCEPT:  
 (A) *Chlamydia trachomatis* (B) *Mycoplasma hominis*  
 (C) *Candida albicans* (D) *Neisseria meningitidis*
017. Metachromatic granules of *C.diphtheriae* are NOT stained by:  
 (A) Neisser's stain (B) Albert's stain  
 (C) Ziehl- Neelsen stain (D) Ponder's stain
018. Pseudomembranous colitis is caused by?  
 (A) *Clostridium perfringens* (B) *Clostridium difficile*  
 (C) *Clostridium tetani* (D) *Clostridium botulinum*
019. \_\_\_\_\_ is an acid fast actinomycete  
 (A) *Streptomyces* (B) *Actinomadura*  
 (C) *Nocardia* (D) *Actinomyces*
020. Bipolar staining is characteristic of:  
 (A) *Yersinia pestis* (B) *Shigella sonnei*  
 (C) *Klebsiella pneumoniae* (D) *Proteus vulgaris*
021. Melioidosis is caused by:  
 (A) *Burkholderia mallei* (B) *Burkholderia pseudomallei*  
 (C) *Burkholderia cepacia* (D) *Burkholderia gladioli*
022. \_\_\_\_\_ is the causative agent of Chancroid  
 (A) *Haemophilus ducreyi* (B) *Haemophilus aegyptius*  
 (C) *Haemophilus haerolyticus* (D) *Haemophilus aphrophilus*
023. All of the following serological tests would aid in the diagnosis of chronic brucellosis EXCEPT:  
 (A) Standard agglutination test (B) Mercaptoethanol test  
 (C) Complement fixation test (D) ELISA for IgG antibodies
024. Weil's disease is caused by:  
 (A) *Leptospira interrogans* (B) *Borrelia recurrentis*  
 (C) *Treponema carateum* (D) *Treponema pallidum*
025. 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
026. Melanin pigment is a surface component virulence factor in this fungal pathogen-  
 (A) *Aspergillus flavus* (B) *Cryptococcus neoformans*  
 (C) *Rhizopus species* (D) *Coccidioides*

027. Black piedra is caused by  
 (A) *Hortaea wernckii* (B) *Curvularia lunata*  
 (C) *Piedraia hortae* (D) *Scytalidium dimidiatum*
028. Chromoblastomycosis is described by presence of  
 (A) Sclerotic bodies (B) Negri bodies  
 (C) Aster bodies (D) None of the above
029. Organism that does not cause onychomycosis:  
 (A) *Trichophyton* (B) *Epidermophyton*  
 (C) *Microsporum* (D) *Candida albicans*
030. 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
031. A 30 year old traveller from Argentina 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
032. Which class of antibody has the ability to cross placenta?  
 (A) IgG (B) IgA  
 (C) IgM (D) IgD
033. Correct statement among the following is:  
 (A) The lecithinase of *Clostridium perfringens* causes diarrhea  
 (B) Lipopolysaccharide is a part of cell wall of *Escherichia coli*  
 (C) Cholera toxin is attached to the flagella of *Vibrio cholera*  
 (D) Toxic shock syndrome toxin I is produced by strains of *Staphylococcus epidermidis*
034. 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
035. Which of the following organism principally infects liver and kidney?  
 (A) *Streptobacillus moniliformis* (B) *Leptospira interrogans*  
 (C) *Enterococcus faecalis* (D) *Treponema pallidum*
036. \_\_\_\_\_ has no activity against *Pseudomonas aeruginosa*  
 (A) Imipenem (B) Meropenem  
 (C) Doripenem (D) Ertapenem
037. Which one of the following is a recommended therapy for HSV genital infection?  
 (A) Acyclovir (B) Herpes immune globulin  
 (C) Interferon alpha (D) Ribavirin

038. \_\_\_\_\_ exclusively affects humans.  
 (A) Mpox virus (B) Molluscum contagiosum  
 (C) Tanapox (D) Yaba tumor virus
039. 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
040. The commonest etiological agent of endocarditis associated with intravenous drug abusers is:  
 (A) Staphylococcus aureus (B) Staphylococcus epidermidis  
 (C) Aspergillus fumigatus (D) Streptococcus agalactiae
041. Ergot alkaloids are produced by  
 (A) Aspergillus flavus (B) Fusarium nivale  
 (C) Claviceps purpurea (D) Penicillium rubrum
042. \_\_\_\_\_ discovered prions.  
 (A) Carlton Gajdusek (B) Stanley B Prusiner  
 (C) Sigurdsson (D) Karry B Mullis
043. Subacute sclerosing panencephalitis may occur as complication in:  
 (A) Mumps (B) Measles  
 (C) Rubella (D) Respiratory syncytial virus
044. Which of following bacteria is non-motile?  
 (A) Pseudomonas stutzeri (B) Burkholderia mallei  
 (C) Burkholderia pseudomallei (D) Stenotrophomonas maltophilia
045. Bacteriophages were discovered by  
 (A) d'Herelle (B) W.H Welch  
 (C) Kitasato (D) Robert Bruce
046. The generation time of Mycobacterium leprae is-  
 (A) 20 minutes (B) 20 days  
 (C) 20 hours (D) 20 seconds
047. Property responsible for bleaching is  
 (A) Oxidation (B) Conjugation  
 (C) Precipitation (D) Septication
048. Resolution power of electron microscope is  
 (A) 0.5 mm (B) 0.5  $\mu$ m  
 (C) 0.5 nm (D) 0.5 cm
049. \_\_\_\_\_ is a non-cultivable fungus  
 (A) Sporothrix (B) Rhinosporidium  
 (C) Acremonium (D) Blastomyces
050. Movement of Listeria monocytogenes inside host cells is caused by  
 (A) Inducing host cell actin polymerization (B) Formation of pili on the surface of Listeria  
 (C) Tumbling motility (D) Motion of listeria flagella

051. *Aedes aegypticus* transmits:  
 (A) Japanese Encephalitis (B) Kyasanur Forest Disease  
 (C) Malaria (D) Dengue
052. Which among the following does not enter human body via skin?  
 (A) *Ancylostoma* (B) *Strongyloides*  
 (C) *Trichinella* (D) *Necator americanus*
053. The most common site for Amebiasis is:  
 (A) Sigmoid colon (B) Transverse colon  
 (C) Cecum (D) Hepatic flexure
054. Most common organism causing keratitis infection in soft contact lens users is:  
 (A) *Naegleria* (B) *Acanthamoeba*  
 (C) *Gonococcus* (D) *Staphylococcus aureus*
055. Strawberry cervix is seen in:  
 (A) *Gardenerella vaginalis* (B) *Trichomonas vaginalis*  
 (C) *Mycoplasma hominis* (D) *Neisseria gonorrhoeae*
056. Amastigote forms are seen in:  
 (A) *Leishmania donovani* (B) *Toxoplasma gondi*  
 (C) *Trypanosoma* (D) *Entamoeba*
057. Auto infection not a feature of:  
 (A) *Ascaris lumbricoides* (B) *Hymenolepis nana*  
 (C) *Tenia solium* (D) *Enterobius vermicularis*
058. All of the following cause lymphatic filariasis EXCEPT  
 (A) *Loa loa* (B) *Wuchereria bancrofti*  
 (C) *Brugia malayi* (D) *Brugia timori*
059. Cerebral malaria is associated with:  
 (A) *Plasmodium falciparum* (B) *Plasmodium ovale*  
 (C) *Plasmodium vivax* (D) *Plasmodium malariae*
060. Which of the following is not a coccidian?  
 (A) *Isospora* (B) *Cyclospora*  
 (C) *Cryptosporidia* (D) *Enterocytozoon*
061. Gold standard test for lab diagnosis of Babesiosis is:  
 (A) Giemsa stain (B) Culture  
 (C) PCR (D) Antibody detection
062. Dwarf tapeworm refers to:  
 (A) *Echinococcus granulosus* (B) *Loa Loa*  
 (C) *Hymenolepis nana* (D) *Schistosoma mansoni*
063. Cercariae are infective form of:  
 (A) *S. hematobium* (B) *P. westermanii*  
 (C) *F. hepatica* (D) *T. solium*

064. What is the key histopathological feature of mucormycosis?  
 (A) Septate hyphae (B) Broad, ribbon-like non-septate hyphae  
 (C) Yeast forms with pseudohyphae (D) Spherules filled with endospores
065. Which of the following fungi is known for causing systemic mycosis and can be identified by the presence of spherules in tissue?  
 (A) *Histoplasma capsulatum* (B) *Coccidioides immitis*  
 (C) *Blastomyces dermatitidis* (D) *Sporothrix schenckii*
066. "Copper pennies" on the skin is a characteristic feature of \_\_\_\_\_  
 (A) Sporotrichosis (B) Chromoblastomycosis  
 (C) Tinea corporis (D) Candidiasis
067. Which organism is the most common cause of opportunistic fungal infections in immune compromised patients?  
 (A) *Candida albicans* (B) *Aspergillus fumigatus*  
 (C) *Cryptococcus neoformans* (D) *Histoplasma capsulatum*
068. Antifungal agent commonly used to treat cryptococcal meningitis:  
 (A) Fluconazole (B) Amphotericin B  
 (C) Itraconazole (D) Voriconazole
069. Which of the following is NOT typically used in the treatment of fungal infections?  
 (A) Ketoconazole (B) Amphotericin B  
 (C) Metronidazole (D) Voriconazole
070. The classic clinical presentation of sporotrichosis is:  
 (A) Systemic pneumonia (B) Ulcerative lesions on the skin  
 (C) Ocular infections (D) Disseminated infection with spherules
071. Preferred strain for active immunization for Measles in India:  
 (A) Jeryl-Lynn (B) Edmonston-Zagreb  
 (C) Moraten (D) Schwarz
072. Transport medium used for throat swabs in suspected cases of Streptococcal pharyngitis:  
 (A) Stuart's medium (B) Pike's medium  
 (C) Buffered glycerol saline (D) Cary-blair medium
073. Bacillus Calmette-Guérin (BCG) vaccine is administered by \_\_\_\_\_ route  
 (A) Intradermal (B) Subcutaneous  
 (C) Intramuscular (D) Oral
074. Zygomycosis is caused by:  
 (A) *Aspergillus & Penicillium* (B) *Coccidioidis & Histoplasma*  
 (C) *Mucor & Rhizopus* (D) *Candida & Cryptococcus*
075. The non-tuberculous mycobacteria that cause pulmonary disease similar to tuberculosis are  
 (A) *M. kansasii* (B) *M. gordonae*  
 (C) *M. scrofulaceum* (D) *M. fortuitum*
076. Which of these is a DNA virus?  
 (A) Influenza virus (B) SARS-CoV-2  
 (C) Adenovirus (D) Mumps virus

077. Kass concept of significant bacteriuria is not applicable in case of :
- (A) *Klebsiella pneumoniae* (B) *Staphylococcus aureus*  
 (C) *Escherichia coli* (D) *Proteus vulgaris*
078. All of the following are features of Reiter's syndrome EXCEPT
- (A) Urethritis (B) Polyarthritis  
 (C) Recurrent conjunctivitis (D) Myocarditis
079. *Sleeping sickness* is caused by
- (A) *Toxoplasma gondii* (B) *Trypanosoma cruzi*  
 (C) *Trypanosoma brucei* (D) *Trypanosoma rangeli*
080. All of the following are viral zoonotic diseases EXCEPT
- (A) Dengue (B) Plague  
 (C) Chikungunya (D) Rabies
081. Positive Schick test indicates that person is:
- (A) Immune to diphtheria (B) Hypersensitive to diphtheria  
 (C) Susceptible to diphtheria (D) Carrier of diphtheria
082. Wool sorter disease is:
- (A) Cutaneous anthrax (B) Pulmonary anthrax  
 (C) Intestinal anthrax (D) Injection anthrax
083. A patient is presented with trismus with opisthotonus position. The probable causative agent is:
- (A) *Clostridium tetani* (B) *Clostridium perfringens*  
 (C) *Clostridium difficile* (D) *Clostridium botulinum*
084. *Bacillus cereus* food poisoning is associated with which food?
- (A) Fried rice (B) Baked potato  
 (C) Dairy products (D) Honey
085. Fish tank granuloma is caused by:
- (A) *M. kansasii* (B) *M. marinum*  
 (C) *M. paratuberculosis* (D) *M. gordonae*
086. Most common cause of diarrhoea in children of developing countries is:
- (A) EHEC (B) ETEC  
 (C) EPEC (D) EIEC
087. Traveller's diarrhea is caused by:
- (A) EHEC (B) ETEC  
 (C) EPEC (D) EIEC
088. Dienes' phenomena is seen with:
- (A) *Proteus mirabilis* (B) *Klebsiella*  
 (C) *Providentia* (D) *Morganella*
089. All are catalase positive except:
- (A) *Shigella flexneri* (B) *Shigella boydii*  
 (C) *Shigella dysenteriae* type 1 (D) *Shigella sonnei*

090. Drug commonly used against enteric fever are all **EXCEPT**:
- (A) Amikacin (B) Ciprofloxacin  
(C) Ceftriaxone (D) Azithromycin
091. In a patient with typhoid, diagnosis after 15 days of onset of fever is best done by:
- (A) Blood culture (B) Widal test  
(C) Stool culture (D) Urine culture
092. Red pigment producing bacteria is:
- (A) E coli (B) Bordetella parapertussis  
(C) Pseudomonas aeruginosa (D) Serratia marcescens
093. A girl from Shimla presented to OPD with fever, hypotension, malaise and axillary and inguinal lymphadenopathy. Culture in glucose broth shows stalactite growth. Most likely causative organism is:
- (A) Yersinia pestis (B) Francisella tularensis  
(C) Brucella abortus (D) Coxiella burnetii
094. Which of the following is **NOT** a source of infection in plague?
- (A) Case of bubonic plague (B) Case of pneumonic plague  
(C) Infected rodents (D) Infected rat flea
095. Which of the following statement(s) is/are wrong about the 8th pandemic of cholera?
- (A) Caused by Vibrio cholerae O139 (B) Started in 1992  
(C) Started in Bangladesh (D) Mostly confined to Bangladesh & India
096. Selective media for Vibrio cholerae
- (A) TCBS medium (B) Stuart medium  
(C) Skirrow's medium (D) MYPa medium
097. Clue cells are seen in \_\_\_\_\_ infection:
- (A) Trichomonas vaginalis (B) Bacterial vaginosis  
(C) Candidiasis (D) Herpes
098. Pontiac fever is caused by:
- (A) Legionella micdadei (B) Legionella pneumophila serogroup 1  
(C) Legionella adelaidensis (D) Legionella anisa
099. An elderly man presented with fever and cough. Sputum examination revealed gram-negative organisms that were grown on Buffered charcoal yeast extract agar. The organism involved is:
- (A) H. influenzae (B) Legionella pneumophila  
(C) Burkholderia cepacia (D) Brucella abortus
100. A patient comes with history of unresponsive fever and cough. On examination of sputum it is negative for mycobacterium. Chest X-ray shows pneumonia. BAL shows gram-positive branching filaments. Organism was partially AFB positive. Causative organism is
- (A) Actinomycetes (B) Nocardia  
(C) Aspergillus (D) Penicillium
101. Drug of choice for pseudomembranous enterocolitis:
- (A) Oral Vancomycin (B) Penicillin  
(C) Oral Ampicillin (D) Clindamycin

102. HACEK group includes all except:  
 (A) Haemophilus arophillus (B) Acinetobacter baumanii  
 (C) Eikenella corrodens (D) Cardiobacterium hominis
103. Hutchinson's triad a feature of:  
 (A) Primary Syphilis (B) Secondary Syphilis  
 (C) Tertiary Syphilis (D) Late Congenital Syphilis
104. Leptospirosis is transmitted by:  
 (A) Rat (B) Dog  
 (C) Cat (D) Fish
105. Scrub typhus transmitted by:  
 (A) Reduviid bug (B) Trombiculid mite  
 (C) Enteric pathogens (D) Cyclops
106. A man with very high fever shows strongly positive agglutination test with OXK antigen. The most likely diagnosis is:  
 (A) Tsutsugamushi fever (B) Trench fever  
 (C) Undulant fever (D) Relapsing fever
107. Lancefield grouping of Streptococcus is done by using:  
 (A) M Protein (B) Group C peptidoglycan cell wall  
 (C) Group C carbohydrate antigen (D) Staining properties
108. Treatment of leprosy according to WHO is done by all EXCEPT:  
 (A) Dapsone (B) Ciprofloxacin  
 (C) Clofazimine (D) Rifampicin
109. Diene's method is used for:  
 (A) Mycoplasma (B) Chlamydiae  
 (C) Plague (D) Diphtheria
110. Stenotrophomonas maltophilia is resistant to all EXCEPT:  
 (A) Amikacin (B) Gentamicin  
 (C) Ceftazidime (D) Chloramphenicol
111. Hand Foot Mouth Disease is caused by:  
 (A) Coxsackie A (B) Coxsackie B  
 (C) Enterovirus 68 (D) Enterovirus 70
112. A cat scratches a man who is recovering from a kidney transplant. He develops fever and lymphadenopathy. What is the most probable causative organism?  
 (A) Spirillum minus (B) Francisella tularensis  
 (C) Bartonella henslae (D) Mycoplasma pneumoniae
113. A woman presents with slowly enlarging patches of brown, slightly scaly skin in her axilla, which was diagnosed as *Corynebacterium minutissimum* by Wood's lamp examination. Which colour of fluorescence would have led to this diagnosis?  
 (A) Coral red (B) Apple green  
 (C) Neon yellow (D) Bright blue

114. The suffix -viridae indicates:
- (A) Order (B) Genus  
(C) Family (D) Species
115. San Joaquin Valley fever is caused by which of the following?
- (A) Blastomyces (B) Coccidioides  
(C) Histoplasma (D) Paracoccidioides
116. Which serotype of adenovirus is associated with gastroenteritis?
- (A) 3 (B) 17  
(C) 37 (D) 41
117. A 48-year-old man presents with fever. Which of the following, if seen, is enough to give a Definite diagnosis of Infective Endocarditis?
- (A) Presence of Roth's spots (B) Worsening of a pre-existing murmur  
(C) Positive blood culture for *Candida auris* (D) Cocci seen in cardiac vegetation biopsy
118. Marburg virus was first identified in:
- (A) Rats (B) Mice  
(C) Beagles (D) Monkeys
119. Which of the following paramyxoviruses has a surface glycoprotein lacking haemagglutin activity?
- (A) Measles virus (B) Mumps virus  
(C) Parainfluenza virus type 1 (D) Respiratory syncytial virus
120. A vaginal sample is examined by microscopy and no Lactobacillus morphotypes are seen, >30/OIF Gardnerella /Bacteroides morphotypes are seen and >5/OIF Curved Gram variable rods are seen. What is the Nugent score of the sample?
- (A) 3 (B) 5  
(C) 6 (D) 10
121. Loop Mediated Isothermal Amplification requires the use of how many primers?
- (A) 2 (B) 6  
(C) 10 (D) 15
122. In the 1960s, the Poliomyelitis vaccines were developed by culturing the virus on the kidney cells of an animal. These cells were found to be contaminated by another virus, SV40. Which animal kidney was used?
- (A) cow (B) monkey  
(C) mouse (D) pig
123. The first malaria vaccine with WHO approval is the RTS,S vaccine. The first S stands for surface protein, what does the latter S stand for?
- (A) Surface Antigen of HBV (B) Sporozoite protein  
(C) *Staphylococcal* coagulase (D) Fungal cell wall esterase
124. A migrant worker from Bihar presents with fever, malaise, and enlarged spleen. On Peripheral smear LD bodies are seen. Which is the infective stage of the organism?
- (A) Amastigote (B) Promastigote  
(C) Epimastigote (D) Tachyzoite

125. Which of the following Biosafety Levels is recommended for the handling of culture suspected of *Mycobacterium tuberculosis*?
- (A) BSL-1 (B) BSL-2  
 (C) BSL-3 (D) BSL-4
126. Which of the following is NOT a vector of Chandipura virus?
- (A) Tick  (B) Tsetse fly  
 (C) Mosquito (D) Sandfly
127. A 20-year-old comes to the OPD with history of bite by a stray dog 4 days ago. On examination, there are puncture wounds on the calf of the patient. What is the recommended treatment in this case?
- (A) 20 IU/kg of Equine Rabies Ig and Rabies Vaccine  
 (B) Rabies vaccine only  
 (C) 40 IU/kg of Equine Rabies Ig and Rabies Vaccine  
 (D) 20 IU/kg of Equine Rabies Ig only
128. Boutonneuse Fever/Marseilles fever/Indian Tick typhus/Astrakhan spotted fever is caused by which of the following organisms?
- (A) *Rickettsia prowazeki*  (B) *Rickettsia conorii*  
 (C) *Rickettsia parkeri* (D) *Rickettsia rickettsii*
129. Which of the following must be shipped in UN Category A transport?
- (A) SARS-CoV-2 RNA extract  (B) HSV 1 Culture filtrate  
 (C) DENV IgG positive serum (D) Sterile Viral Transport Media
130. A 34-year-old male presents with painless nodules on the genitals that progressed to beefy red ulcers. He is HIV-positive male with a history of unprotected intercourse. Which organism is likely involved?
- (A) *Chlamydia trachomatis*  (B) *Klebsiella granulomatis*  
 (C) *Neisseria gonorrhoea* (D) *Hemophilus ducreyi*
131. Illumina sequencing is which type?
- (A) SOLid Sequencing (B) DiDeoxynucleotide sequencing  
 (C) Sequencing by synthesis (D) Chain Termination sequencing
132. A researcher in a BSL 3 lab is studying a bacterium. She stains it with polychrome methylene blue. The capsule appears pale pink and bacillary body is blue. This implies which of the following organisms?
- (A) *Bacillus anthracis*  (B) *Brucella abortus*  
 (C) *Corynebacterium diphtheriae* (D) *Haemophilus influenzae*
133. Rat bite Fever is caused by:
- (A) *Streptobacillus moniliformis* (B) *Cutibacterium acnes*  
 (C) *Francisella tularensis* (D) *Eikenella corrodens*
134. Poly acrylamide gel electrophoresis separates molecules based on:
- (A) Atomic Charge  (B) Molecular Weight  
 (C) Ionic Potential (D) Antigen-antibody interaction

135. A child comes to OPD with bright red “slapped cheeks” and a lacy, reticular exanthem on the torso and extremities. Which type of virus would have most likely caused these symptoms?
- (A) ssRNA virus (B) dsRNA virus  
 (C) ssDNA virus (D) dsDNA virus
136. Which biosafety level is needed for SARS-CoV-2 PCR and Culture respectively?
- (A) BSL 2 and BSL 2  (B) BSL 2 and BSL 3  
 (C) BSL 3 and BSL 3 (D) BSL 2 and BSL 4
137. Which is the best method to determine Mycoplasma contamination in a cell line?
- (A) Stain with Hoechst and view under microscope  
 (B) Observe under microscope for autofluorescence  
 (C) Stain with Alexa-Fluor and view under microscope  
 (D) RNA PCR for *Mycoplasma* genes
138. Warthin-Finkeldy cells are characteristic of which virus?
- (A) Mumps Virus  (B) Measles Virus  
 (C) Epstein Barr Virus (D) Cytomegalovirus
139. A nurse presents to the OPD with a small painful abscess on the end of her left ring finger. A biopsy was taken, and cells with inclusion bodies were seen. What is the recommended treatment?
- (A) Self-limiting (B) Surgical excision  
 (C) Permethrin  (D) Acyclovir
140. Mollaret’s meningitis is most commonly associated with which part of the brain?
- (A) Cerebellum (B) Occipital Lobe  
 (C) Temporal lobe (D) Brainstem
141. Which one of the following vaccines is contraindicated in children with egg allergy?
- (A) MMR (B) BCG  
 (C) DPT  (D) Yellow Fever
142. Virus quantification is done by:
- (A) Egg inoculation (B) Hemadsorption  
 (C) Plaque assay (D) Electron microscopy
143. The following is not a live vaccine:
- (A) Measles (B) BCG  
 (C) Yellow fever  (D) Salk’s vaccine
144. Progressive multifocal leukoencephalopathy is caused by
- (A) CMV (B) EBV  
 (C) JC virus (D) RSV
145. MC serotype of HPV causing Cancer Cervix:
- (A) HPV-6 (B) HPV-11  
 (C) HPV-16 (D) HPV-33
146. Bollinger bodies are seen in:
- (A) Chickenpox (B) Cowpox  
 (C) Fowl pox (D) Smallpox

147. Owl's eye appearance inclusions are seen in:  
 (A) Herpes simplex virus infections (B) Cytomegalovirus infections  
 (C) Epstein-Barr virus infection (D) Adenovirus infection
148. Slapped cheek sign is seen in:  
 (A) Parvovirus B19 (B) JC virus  
 (C) Rotavirus (D) Mumps
149. A patient presented with a vesicle on skin. Tzank smear showed giant cells. Causative agent is:  
 (A) Vaccinia virus (B) Varicella zoster  
 (C) Parvovirus B19 (D) Molluscum contagiosum
150. HHV-8 causes:  
 (A) Burkitt's lymphoma (B) Nasopharyngeal carcinoma  
 (C) Kaposi sarcoma (D) Hepatic carcinoma
151. Least common complication in measles?  
 (A) SSPE (B) Pneumonia  
 (C) Otitis media (D) None of the above
152. Forschheimer spots seen in:  
 (A) Rubella (B) Measles  
 (C) Mumps (D) Chickenpox
153. Giant cell (Hecht's) pneumonia is due to:  
 (A) CMV (B) Measles  
 (C) Malaria (D) P. carinii
154. In Japanese Encephalitis, pig acts as:  
 (A) Amplifier (B) Definitive host  
 (C) Intermediate host (D) Any of the above
155. Rabies free zone in India:  
 (A) Lakshadweep island (B) Rajasthan  
 (C) Sikkim (D) Nagaland
156. Enterovirus associated with acute hemorrhagic conjunctivitis is:  
 (A) Serotype 68 (B) Serotype 69  
 (C) Serotype 70 (D) Serotype 71
157. With which of the following of viral hepatitis infection in pregnancy, the maternal mortality is highest:  
 (A) Hepatitis A (B) Hepatitis B  
 (C) Hepatitis C (D) Hepatitis E
158. Which of the following is true?  
 (A) Hantavirus pulmonary syndrome is caused by inhalation of rodent urine and feces  
 (B) KFD is caused by bite of wild animal  
 (C) Lyssa virus is transmitted by tick  
 (D) Yellow fever is endemic in India

159. Most virulent dengue fever strain is:  
 (A) 1 (B) 2  
 (C) 3 (D) 4
160. HIV infects which of the following cells?  
 (A) NK cells (B) T-helper cells  
 (C) T suppressor cells (D) Plasma cells
161. Best chemical disinfectant to disinfect stethoscope is:  
 (A) Isopropyl alcohol (B) Ethylene oxide  
 (C) Halogenated compound (D) Steam plasma sterilization
162. Prions are best killed by:  
 (A) Autoclaving at 121°C (B) 5% formalin  
 (C) Sodium hydroxide for 1 hour (D) Sodium hypochloride for 10 min
163. Smith Noguchi's media is used for :  
 (A) Salmonella (B) Klebsiella  
 (C) Spirochetes (D) Bacillus
164. Robertson cooked meat broth is an example  
 (A) Enriched media (B) Enrichment media  
 (C) Nutrient media (D) Anaerobic media
165. All of the following are required in PCR except:  
 (A) Deoxyribonucleotides (B) Thermostable enzyme/DNA polymerase  
 (C) Dideoxynucleotides (D) Magnesium/ssDNA/Template DNA
166. Movement of DNA from one bacteria to another connection tube or pilus is called;  
 (A) Transformation (B) Transduction  
 (C) Conjugation (D) Lysogenic conversion
167. Pick the true statement regarding plasmids  
 (A) Nonself-replicative  
 (B) Acts as Messenger RNA  
 (C) Involved in Conjugational transfer between strains  
 (D) Involved in transformation
168. Which of the following is the main virulence factor of *Staphylococcus aureus* responsible for causing severe tissue damage in toxic shock syndrome?  
 (A) Coagulase (B) Exfoliative toxin  
 (C) Protein A (D) Toxic shock syndrome toxin-1 (TSST-1)
169. Which of the following viruses is most commonly associated with the common cold?  
 (A) Influenza virus (B) Rhinovirus  
 (C) Herpes simplex virus (D) Epstein-Barr virus
170. Which of the following antimicrobial drugs targets bacterial cell wall synthesis?  
 (A) Penicillin (B) Ciprofloxacin  
 (C) Erythromycin (D) Rifampin

171. Which of the following is the primary host defense mechanism against *Candida* infections?  
 (A) B cells (B) Phagocytosis by neutrophils  
 (C) Natural killer cells (D) T helper cells
172. Which organism is the leading cause of bacterial meningitis in adults?  
 (A) *Neisseria meningitidis* (B) *Streptococcus pneumoniae*  
 (C) *Listeria monocytogenes* (D) *Haemophilus influenzae*
173. Which of the following antibiotics is used as the first-line treatment for community-acquired pneumonia caused by *Streptococcus pneumoniae*?  
 (A) Azithromycin (B) Doxycycline  
 (C) Ceftriaxone (D) Penicillin
174. Which of the following microorganisms is most commonly associated with infections of the urinary tract?  
 (A) *Streptococcus pneumoniae* (B) *Escherichia coli*  
 (C) *Neisseria gonorrhoeae* (D) *Pseudomonas aeruginosa*
175. Which of the following bacteria is a common cause of wound infections and can produce a greenish pigment on agar?  
 (A) *Streptococcus pyogenes* (B) *Staphylococcus aureus*  
 (C) *Pseudomonas aeruginosa* (D) *Enterococcus faecalis*
176. Which of the following is the most significant virulence factor of *Streptococcus pyogenes* in the pathogenesis of necrotizing fasciitis?  
 (A) Streptokinase (B) M protein  
 (C) Exotoxin A (D) Hyaluronidase
177. Which of the following is a primary diagnostic method for detecting *Neisseria gonorrhoeae* in a clinical specimen?  
 (A) Direct fluorescent antibody (DFA) test (B) Gram stain of urethral discharge  
 (C) Blood culture (D) Skin biopsy and culture
178. Which of the following methods is most commonly used to identify *Streptococcus pneumoniae*?  
 (A) Catalase test (B) Optochin susceptibility test  
 (C) Coagulase test (D) Bacitracin sensitivity test
179. Which of the following is characteristic of *Clostridium difficile* infections?  
 (A) Causes watery diarrhea, often after antibiotic use  
 (B) Produces a characteristic greenish pigment on agar  
 (C) Is associated with wound infections and gas gangrene  
 (D) Causes pharyngitis and tonsillitis
180. Which of the following is the most important virulence factor of *Helicobacter pylori* in the development of peptic ulcers?  
 (A) Urease enzyme (B) Lipopolysaccharide  
 (C) Exotoxins (D) M protein
181. Which of the following is a common causative agent of food poisoning, often linked to improperly handled or stored poultry?  
 (A) *Salmonella enterica* (B) *Staphylococcus aureus*  
 (C) *Escherichia coli* (D) *Clostridium perfringens*

182. Which of the following is the primary virulence factor responsible for the pathogenicity of *Streptococcus pyogenes* in causing pharyngitis?  
 (A) Streptokinase (B) M protein  
 (C) Hyaluronidase (D) Exotoxins
183. Which of the following is the most common method for detecting *Human Immunodeficiency Virus* (HIV) in a patient?  
 (A) Direct fluorescent antibody test  
 (B) PCR for HIV RNA  
 (C) Enzyme immunoassay (EIA) for HIV antibodies  
 (D) Western blot
184. Which of the following microorganisms is commonly used in the production of alcohol through fermentation?  
 (A) *Saccharomyces cerevisiae* (B) *Escherichia coli*  
 (C) *Bacillus subtilis* (D) *Clostridium acetobutylicum*
185. Which of the following microbes is used in the production of citric acid?  
 (A) *Aspergillus niger* (B) *Saccharomyces cerevisiae*  
 (C) *Lactobacillus acidophilus* (D) *Penicillium chrysogenum*
186. Which of the following is the primary application of *Streptomyces griseus* in biotechnology?  
 (A) Production of penicillin (B) Production of streptomycin  
 (C) Production of ethanol (D) Production of citric acid
187. Which of the following is the most common method of producing vaccines in the biotechnology industry?  
 (A) Recombinant DNA technology (B) Live attenuated viruses  
 (C) Inactivated viruses (D) Microbial fermentation
188. Which of the following microorganisms is used in the production of yogurt?  
 (A) *Bacillus subtilis* (B) *Lactobacillus bulgaricus*  
 (C) *Clostridium botulinum* (D) *Escherichia coli*
189. Which of the following is the primary application of *Bacillus thuringiensis*?  
 (A) Bioremediation of oil spills (B) Production of ethanol  
 (C) Biopesticide for agricultural purposes (D) Production of antibiotics
190. Which of the following microbial processes is responsible for the production of vinegar?  
 (A) Alcoholic fermentation (B) Lactic acid fermentation  
 (C) Acetic acid fermentation (D) Propionic acid fermentation
191. Which of the following is the microorganism commonly used in the production of bread?  
 (A) *Saccharomyces cerevisiae* (B) *Lactobacillus acidophilus*  
 (C) *Bacillus subtilis* (D) *Streptococcus thermophilus*
192. Which of the following antibiotics is produced by *Penicillium notatum*?  
 (A) Streptomycin (B) Penicillin  
 (C) Tetracycline (D) Chloramphenicol
193. Which of the following is a primary industrial application of *Escherichia coli* in biotechnology?  
 (A) Production of insulin (B) Production of antibiotics  
 (C) Production of ethanol (D) Production of vitamin B12

194. Which of the following is not an RNA virus?  
(A) Ebola (B) Simian 40  
(C) Rabies (D) Vesicular stomatitis virus
195. *Culex tritaeniorhynchus* is vector of \_\_\_\_\_ disease:  
(A) JE (B) Dengue  
(C) KFD (D) Yellow fever
196. Which of the following arbovirus disease is not found in India?  
(A) Sandfly fever (B) Japanese encephalitis  
(C) West Nile (D) Yellow fever
197. DNA of HBV is:  
(A) Single stranded (B) Double stranded  
(C) Partially single stranded (D) Partially double stranded
198. Reverse transcriptase of HBV is coded on following:  
(A) C gene (B) S gene  
(C) P gene (D) X gene
199. The most common organism causing diarrhea in adults associated with shell fish ingestion:  
(A) Calicivirus (B) Enterovirus type 40, 41  
(C) Norovirus (D) Rota virus
200. All of the following statements are true regarding CNS infection, except:  
(A) Measles virus is the causative agent for subacute sclerosing panencephalitis  
(B) Cytomegalovirus causes bilateral temporal lobe hemorrhagic infarction  
(C) Prions infection causes spongiform encephalopathy  
(D) JC virus is the causative agent for progressive multifocal leukoencephalopathy