

# AXU

## PROVISIONAL ANSWER KEY (CBRT)

Name of the post	Associate Professor, Microbiology, General State Service, Class-1
Advertisement No.	09/2020-21
Preliminary Test held on	02-09-2021
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 04-09-2021; 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 submission 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 અથવા ટપાલ દ્વારા આયોગની કચેરીએ મોકલવા આવેલ વાંધા-સૂચનો ધ્યાને લેવામા 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 કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક 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 ધ્યાનમા 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 : [www.safevaults.in/login](http://www.safevaults.in/login)**

001. Which of the following cell surface markers is required for lysis of IgG coated cells (ADCC) by natural killer cells?
- (A) CD3 (B) CD16  
(C) CD8 (D) CD19
002. After eating a dinner of leftover vegetable fried rice, a 17 year old boy develops diarrhea and abdominal pain. Which of the following is the most likely pathogen?
- (A) *Bacillus cereus* (B) *Campylobacter jejuni*  
(C) *Clostridium botulinum* (D) *Vibrio parahemolyticus*
003. Antibodies against which of the following antigen appear in typhoid carrier?
- (A) H antigen (B) O antigen  
(C) Vi antigen (D) Capsular antigen
004. 3 year old girl presents with recurrent subcutaneous abscesses and furuncles. She also had a history of bacterial pneumonia. Which of the following enzymes is most likely deficient in her neutrophils?
- (A) Aldolase B (B) G6PD  
(C) Glucokinase (D) NADPH oxidase
005. What is the recommended transport medium to culture stool specimen suspected to contain enteric pathogen?
- (A) Amie's transport (B) Buffered glycerol saline  
(C) Pikes medium (D) Stuart's medium
006. Carbolic acid initially is used as an antiseptic for surgery. Who is known as the "Father of antiseptic surgery"?
- (A) Robert Koch (B) Edward Jenner  
(C) Louis Pasteur (D) Joseph Lister
007. Sporulation occurs during which phase of bacterial growth curve?
- (A) Decline phase (B) Lag phase  
(C) Stationary phase (D) Log phase
008. Vaccination protocol is supposed to stimulate which of the following type of immunity?
- (A) Artificial active (B) Artificial passive  
(C) Natural active (D) Natural passive
009.  $\gamma\delta$ T cells – all are true except
- (A) lack both CD4 and CD8 molecules  
(B) part of innate immunity  
(C) requires antigen processing and MHC presentation  
(D) example include intraepithelial lymphocytes (IELs) in gut mucosa
010. Plasma sterilization uses:
- (A) Ethylene oxide (B) Hydrogen peroxide  
(C) Formaldehyde (D) Ozone

011. A cancer patient brought his report of genetic testing to the doctor. Alteration of genes due to transposition was suspected. Which of the following statements is false regarding transposons?
- (A) They are also known as “jumping genes”  
 (B) It was first discovered by Barbara McClintock  
 (C) They are self replicative  
 (D) The ends of transposons carry “inverted repeat” sequences.
012. A microbiologist wants intermediate level disinfectant. Which of the following can be used by him?
- (A) Gluteraldehyde (B) Quaternary ammonium  
 (C) Hydrogen peroxide  (D) Iodophore compound
013. *Geobacillus stearothermophilus* is used as a biological indicator for autoclave. It is an example of which of the following bacteria?
- (A) Mesophilic bacteria (B) Psychrophilic bacteria  
 (C) Both (A) and (B)  (D) Thermophilic bacteria
014. Which of the following is a major component in activation of the complement via alternate pathway?
- (A) C1 (B) C2  
 (C) C3 (D) C4
015. A microorganism was accepted as the causative agent of infectious disease, only when it satisfied all the Koch’s postulates. Which of the following pathogenic bacteria does not fulfill Koch’s postulates?
- (A) *Treponema pallidum* (B) *Yersinia pestis*  
 (C) *Bacillus anthracis* (D) *Helicobacter pylori*
016. What does exaltation refer to?
- (A) Enhancement of virulence (B) removal of cell wall  
 (C) passage through unfavorable host (D) increasing rate of replication
017. Which of the following Streptococcal antigen cross reacts with synovial fluid?
- (A) Carbohydrate group A (B) Cell wall protein  
 (C) Capsular hyaluronic acid (D) Peptidoglycan
018. Which of the following is the most common Staphylococcal phage strain causing hospital infection?
- (A) 80/81A (B) 79/80  
 (C) 3A/3C (D) 69/70
019. Toxin is produced by all except:
- (A) *C. diphtheriae* (B) *C. ulcerans*  
 (C) *C. xerosis* (D) *C. pseudotuberculosis*
020. A patient presented to OPD with clinical features of pneumonia. Sputum examination revealed a Gram positive cocci with alpha hemolysis on sheep agar. Which test will you do to confirm the diagnosis?
- (A) Coagulase test (B) Bacitracin sensitivity  
 (C) CAMP test  (D) Bile solubility

021. Cholera toxin acts by which mechanism?  
 (A) Mimics the adenylate cyclase enzyme  
 (B) Overactivates adenylate cyclase by permanently activating G protein  
 (C) Overactivates guanylate cyclase  
 (D) Inactivates guanylate cyclase
022. A 23 year old male presents with fever and altered sensorium for 2 days with rash on legs. His BP is 70/50 mm Hg and neck stiffness is there. CSF shows bacterial meningitis. Which of the following correctly describes the organism causing this condition?  
 (A) Gram negative kidney shaped diplococci, oxidase positive  
 (B) Gram positive cocci, catalase negative, bacitracin sensitive  
 (C) Gram negative diplococci, ferments glucose and maltose  
 (D) Gram positive diplococci, catalase negative, optochin sensitive
023. Mechanism of direct transfer of free DNA :  
 (A) Transformation (B) Conjugation  
 (C) Transduction (D) Recombination
024. Ecthyma gangrenosum is caused by which bacterial infection?  
 (A) *S.aureus* (B) *S.pyogenes*  
 (C) *C. minutissimum*  (D) *P.aeruginosa*
025. A patient of RHD developed infective endocarditis after dental extraction. Most likely organism causing this is:  
 (A) *S.viridans* (B) *S.pneumoniae*  
 (C) *S.pyogens* (D) *S.aureus*
026. Vaccine for group B meningococci contains all, except:  
 (A) Adhesin A (B) Heparin binding antigen  
 (C) Capsular polysaccharide (D) Outer membrane vesicles
027. Johne's bacillus is:  
 (A) *H.influenza*  (B) *M.paratuberculosis*  
 (C) *K.pneumoniae* (D) *B.pseudomallei*
028. All are true about Listeria except:  
 (A) Gram positive  
 (B) PALCAM agar is used for isolation  
 (C) Characteristic tumbling motility at 37°C  
 (D) Facultative intracellular organism
029. 'World Tuberculosis Day' is celebrated on:  
 (A) December 1 (B) April 7  
 (C) November 11  (D) March 24
030. A 5 year old child presented with pseudomembrane formation, sore throat and bull neck. Culture shows cuneiform pattern of organism. Which of the following is the toxigenicity factor of the causative organism?  
 (A) Beta phage (B) Lambda phage  
 (C) Gamma phage (D) Delta phage

031. A 34 year old male who is truck driver and HIV positive, presented with small painless, open, fleshy, oozing, beefy red ulcer nodules in genital region. H/O of sexual exposure 15 days back present. What can be the diagnosis?
- (A) *Klebsiella granulomatis* (B) *Chlamydia trachomatis*  
 (C) *Neisseria gonorrhoea* (D) *Haemophilus ducreyi*
032. Fifth disease is caused by-
- (A) Papova virus (B) Parvovirus B-19  
 (C) Herpes virus (D) Adeno virus
033. A peripheral blood smear of a patient with fever and chills shows Maltese cross arrangement of parasite in RBC. Identify the vector that is involved in the given condition.
- (A) Glossina (B) Reduviid bug  
 (C) Ixodid tick (D) Female anopheles
034. Syncytium formation is the characteristic cytopathic effect produced by which of the following virus?
- (A) BK virus (B) Herpes virus  
 (C) SV 40 virus (D) Measles virus
035. Which immunoglobulin deficiency is associated with Giardiasis?
- (A) IgE (B) IgA  
 (C) IgG (D) IgM
036. rK39 test for antibody detection is done for which of the following causative organism?
- (A) T.brucei (B) T.cruzei  
 (C) L.donovani (D) P.vivax
037. A 30 year old patient presented with features of acute meningoencephalitis and he had recently gone for diving during vacation. His CSF on wet mount showed motile unicellular microorganism. The most likely organism is:
- (A) Naegleria fowleri (B) Acanthamoeba  
 (C) E.histolytica (D) E.coli
038. All structures are seen in cyst of E.histolytica except?
- (A) Glycogen mass (B) Chromatid bars  
 (C) Eccentric nucleus (D) Ingested RBC
039. A Researcher conducted a study to identify risk factors for exacerbation of bronchial asthma. In order to have maximum number of publications from the work, the researcher decided to produce three different manuscripts covering all aspects of the study. This act is called-
- (A) Plagiarism (B) Falsification  
 (C) Salami slicing (D) Fabrication
040. Which of the following causative organism shows band shaped trophozoites in peripheral blood smear?
- (A) P.ovale (B) P.vivax  
 (C) P.malariae (D) P.falciparum

041. Which of the following statement is true regarding malaria?  
 (A) Thick smear is gold standard to identify species  
 (B) Thin smear is better to identify species  
 (C) All species have same incubation period  
 (D) Antibody detection is used for rapid diagnosis
042. A HIV reactive patient presents with watery diarrhea. Stool examination shows 4-5 micron size acid fast oocyst. What is the most likely causative agent?  
 (A) Cryptosporidium (B) Microspora  
 (C) Cyclospora (D) Isospora
043. Which of the following is not a feature of tropical eosinophilia?  
 (A) Eosinophilia more than 3000/mm<sup>3</sup>  
 (B) Microfilaria in peripheral blood  
 (C) Seen as a hypersensitivity reaction to filarial antigen  
 (D) Classical features of lymphatic filariasis absent
044. A woman is diagnosed with roundworm infection. How did she probably acquire this infection?  
 (A) Ingestion of water containing filariform larvae  
 (B) Skin penetration by filariform larvae  
 (C) Skin penetration by rhabditiform larvae  
 (D) Ingestion of food contaminated with eggs
045. A patient from Bihar with fever and lymphadenitis shows sheathed microfilaria with no nuclei in tail tip. Which of the following is the most likely diagnosis?  
 (A) B.malayi  (B) W.bancrofti  
 (C) Loa loa (D) Oncocerca volvulus
046. A 29 year old presents with rectal bleeding and abdominal pain. Sigmoidoscopy showed 'coconut like rectum' appearance. Which parasite can lead to such condition?  
 (A) Ascaris (B) H.nana  
 (C) Ancylostoma duodenale  (D) Trichuris trichiura
047. "Calabar swelling" is caused by  
 (A) Ascaris (B) Hymenolepis  
 (C) Loa Loa (D) Strongyloides
048. Which of the following is referred as the larval form of Taenia?  
 (A) Cysticercus (B) Cysticercoid  
 (C) Coracidium (D) Conerus
049. Which of the following parasite lives in bladder plexus?  
 (A) Schistosoma (B) Fasciola  
 (C) Ascaris (D) Echinococcus
050. Largest trematode infecting humans:  
 (A) Fasciola hepatica  (B) Fasciola buski  
 (C) S.hematobium (D) P.westermani

051. All of the following intradermal skin tests have been used in parasitic infections, except:  
 (A) Casoni's test (B) Fairley's test  
 (C) Montenegro test (D) Anton test
052. The most rapid and clinically useful test to make the diagnosis of acute Infectious mononucleosis is-  
 (A) IgM antibody to viral core antigen (VCA)  
 (B) IgG antibody to VCA  
 (C) Antibody to Epstein Barr nuclear antigen(EBNA)  
 (D) Culture
053. All of the following features are shown by viruses except?  
 (A) They are filterable agents  
 (B) They are obligate intracellular parasites  
 (C) They contain either DNA or RNA, but never both  
 (D) Multiply by binary fission
054. Match the following laboratory tests and the organism associated with it.  
 1. Paul bunnel test a. Rickettsial infection  
 2. Weil felix reaction b. Infectious mononucleosis  
 3. Tzank test c. toxoplasmosis  
 4. Sabin Feldman dye test d. Herpes virus  
 (A) 1 - b, 2 - a, 3 - d, 4 - c (B) 1 - b, 2 - c, 3 - d, 4 - a  
 (C) 1 - c, 2 - d, 3 - a, 4 - b (D) 1 - d, 2 - a, 3 - b, 4 - c
055. Which of the following is the most useful for evaluating the impact of prevention programs for infectious diseases?  
 (A) Point prevalence (B) Period prevalence  
 (C) Case fatality (D) Incidence
056. All of the following agents are under category A of bioweapons, except?  
 (A) Anthrax (B) SARS  
 (C) Small pox (D) CCHF
057. Which of the following is a post analytic quality indicator for QC in laboratory?  
 (A) Availability of archived samples (B) Incomplete requisitions  
 (C) EQAS performance (D) Calibration of equipments
058. Strategy IIa of NACO algorithm is for-  
 (A) Antenatal screening (B) Sentinel surveillance  
 (C) Transplantation (D) Symptomatic cases
059. First antibody to appear in hepatitis is-  
 (A) IgM anti HBe (B) IgM anti Hbs  
 (C) IgM anti Hbc (D) IgG anti Hbe
060. Chandipura virus is transmitted by-  
 (A) Hard tick (B) Culex mosquito  
 (C) Soft tick (D) Sandfly

061. All are RNA viruses except-
- (A) Ebola virus (B) JC virus  
(C) Corona virus (D) Polio virus
062. Yolk sac inoculation is done for isolation of all, except-
- (A) Arbovirus (B) Chlamydia  
(C) Rickettsia (D) Influenza virus
063. Torres inclusion bodies are seen in infection with-
- (A) Rabies (B) Yellow fever  
(C) CMV (D) Vaccinia virus
064. Most common serotype associated with Vaccine derived polioviruses (VDPvs) is-
- (A) Type-1 (B) Type-2  
(C) Type-3 (D) Any of the above
065. HBeAg of hepatitis B virus is a product of which gene?
- (A) C gene (B) S gene  
(C) P gene (D) X gene
066. LCB stained periorbital exudates in severe panophthalmitis with cellulitis in elderly diabetic shows obtuse angled branching aseptate and broad hyphae. The most likely diagnosis is-
- (A) Candida (B) Aspergillus  
(C) Penicillium (D) Rhizopus spp.
067. What is the primary site of infection in cryptococcosis?
- (A) Adrenal gland (B) Bones  
(C) CNS (D) Lungs
068. Which of the following is sexual fungal spore?
- (A) Zygosporangia (B) Chlamydospore  
(C) Arthrospore (D) Blastospore
069. Which of the following infection shows a positive hair perforation test?
- (A) Epidermophyton (B) Trichophyton  
(C) Exophiala werneckii (D) All of the above
070. A HIV patient presents with cough for 10 days. Sputum culture with SDA shows broad budding yeast with thick mucoid wall. What is the diagnosis?
- (A) Blastomycosis (B) Histoplasmosis  
(C) Coccidiomycosis (D) P.marneffi
071. What is the most likely organism responsible for white piedra?
- (A) Piedra hortae (B) Trichophyton rubrum  
(C) Trichosporon beigelli (D) Exophiala werneckii
072. Medlar bodies are seen in –
- (A) Rhinosporidiosis (B) Chromoblastomycosis  
(C) Coccidiomycosis (D) Sporotrichosis



073. 1, 3 beta-d-glucan assay is done for which infection?  
 (A) Histoplasmosis (B) Dermatophytes  
 (C) Invasive aspergillosis (D) All of the above
074. Which of the following is a louse borne disease?  
 (A) Rickettsial pox (B) Endemic typhus  
 (C) Scrub typhus (D) Epidemic typhus
075. A 24 year old man presents with cellulitis two days after he is bitten by his cat. What is the most likely dominant organism involved in the infection?  
 (A) *Bartonella henselae* (B) *Calymmatobacterium granulomatis*  
 (C) *Pasturella multocida* (D) *Toxoplasma gondii*
076. All of the following is included in Amsel's criteria, except-  
 (A) Vaginal pH < 4.5 (B) Profuse, thin, whitish grey discharge PV  
 (C) Presence of clue cells (D) Positive Whiff test
077. Dienes phenomenon is shown by-  
 (A) *E.coli* (B) *Salmonella*  
 (C) *Proteus* (D) *Vibrio*
078. MRSA is isolated from a pus sample of a diabetic patient. Which of the following is not appropriate for this patient?  
 (A) Vancomycin (B) Imipenem  
 (C) Teicoplanin (D) Quinpristin
079. Sickle shaped conidia are seen in-  
 (A) *Aspergillus* (B) *Fusarium*  
 (C) *Penicillium* (D) *Sporothrix*
080. IMViC pattern, -, -, +, + is indicative of -  
 (A) *E.coli* and *Klebsiella* (B) *E.coli* and *Enterobacter*  
 (C) *Enterobacter* and *Klebsiella* (D) *Klebsiella* and *Shigella*
081. In which of the following guidelines, discussion on rationale and justification of risk benefit analysis of research and voluntary consent in research was initiated?  
 (A) Belmont report (B) Helsinki declaration  
 (C) Nuremberg code (D) CIOMS guidelines
082. In escape mutant hepatitis B infection, which marker will be characteristically absent?  
 (A) HBsAg (B) Anti HBc  
 (C) HBeAg (D) HBV DNA
083. Metallic body implants are discarded in-  
 (A) Yellow container (B) Red container  
 (C) White container (D) Blue container
084. Surgical antimicrobial prophylaxis must be started-  
 (A) 72 hours prior to surgery (B) 48 hours prior to surgery  
 (C) 24 hours prior to surgery (D) 1-2 hours prior to surgery

085. Droplet precautions are applied for following infectious diseases, except -  
 (A) Pertussis (B) Pulmonary TB  
 (C) Plague (D) Diphtheria
086. Which is not an ESKAPE pathogen?  
 (A) *Enterococcus faecium* (B) *Klebsiella pneumoniae*  
 (C) *Proteus mirabilis* (D) *Acinetobacter baumannii*
087. Which azole is effective in mucormycosis?  
 (A) Fluconazole (B) Keetoconazole  
 (C) Voriconazole (D) Isavuconazole
088. All of the following are example of intrinsic antimicrobial resistance, except:  
 (A) Metronidazole - aerobic bacteria (B) Vancomycin - Gram negative bacteria  
 (C) Co-trimoxazole - *S.maltophilia* (D) Polymyxin B - *Proteus*
089. A carrier who acquires the pathogen form another carrier is known as-  
 (A) Paradoxical carrier (B) Convalescent carrier  
 (C) Contact carrier (D) Healthy carrier
090. Which of the following is a double stranded RNA virus?  
 (A) Rhabdovirus (B) Reovirus  
 (C) Parvovirus (D) Retrovirus
091. Which of the following infection will be responsible for stimulating IFN beta?  
 (A) Bacterial infection (B) Viral infection  
 (C) Fungal infection (D) *Mycoplasma* infection
092. "Tuberculate macroconidia" are characteristic features of:  
 (A) *Candida* (B) *Microsporium*  
 (C) *Sporotrichosis* (D) *Histoplasma*
093. All of the following automated systems perform identification and antimicrobial susceptibility test, except-  
 (A) MALDI-TOF (B) VITEK 2  
 (C) Phoenix (D) Microscan Walkaway
094. Obligate intracellular organisms are all, except -  
 (A) *Coxiella burnetii* (B) *Brucella*  
 (C) *Leishmania* (D) *M.leprae*
095. Which of the following bacterial toxin inhibit protein synthesis in host cells?  
 (A) Cholera toxin (B) *Pseudomonas* Exotoxin A  
 (C) heat labile toxin of *E.coli* (D) All of the above
096. Which of the following bacteria does not show swarming?  
 (A) *Proteus* (B) *V.parahemolyticus*  
 (C) *Cl.tetani* (D) *Morganella*
097. Paraffin bait technique is used for cultivation of -  
 (A) *Mycoplasma* (B) *Legionella*  
 (C) *Nocardia* (D) *Actinomycetes*

098. Correct sequence for doffing PPE is  
 (A) Gloves-gown-mask-goggle (B) Gown-mask-goggle-gloves  
 (C) Goggles-gloves-mask-gown (D) Gloves-goggle-gown-mask
099. How many maximum antimicrobial discs should be placed on a 100 mm MHA plate?  
 (A) up to 5 discs (B) up to 6 discs  
 (C) up to 7 discs (D) up to 8 discs
100. "St. Antoni's fire" disease is caused by-  
 (A) Aflatoxin (B) Ochratoxin  
 (C) Coprine poisoning (D) Ergot alkaloid
101. India ink used in  
 (A) Simple staining (B) Negative staining  
 (C) Differential staining (D) Special staining
102. Which of the following is a vaccine design of Covishield...  
 (A) Inactivated-virus vaccine  
 (B) Non-replicating Chimpanzee adenovirus vaccine vector  
 (C) mRNA vaccine  
 (D) Plasmid DNA vaccine
103. Arrangement of flagella in *alcaligenes faecalis* is...  
 (A) Monotrichous (B) Lophotrichous  
 (C) Peritrichous (D) Amphitrichous
104. Tumbling motility seen with...  
 (A) Listeria (B) Mycoplasma  
 (C) Clostridium (D) Spirochete
105. Which of the following cestode does not need an intermediate host to complete the life cycle?  
 (A) Hymenolepis nana (B) Taenia saginata  
 (C) Diphylobothrium latum (D) Echinococcus granulosus
106. Biological indicator used in Hot air oven  
 (A) Spores of *Bacillus geobacillus stearothermophilus*  
 (B) Spores of *Bacillus atrophaeus*  
 (C) Spores of *Bacillus anthracis*  
 (D) Spores of *Bacillus cereus*
107. HEPA filters removes particles that have a size of less than  
 (A) 0.5 micrometer (B) 0.12 micrometer  
 (C) 0.3 micrometer (D) 0.8 micrometer
108. Egg and serum based media sterilized by  
 (A) Inspissation (B) Tyndallization  
 (C) Pasteurization (D) Autoclave

109. Auto fluorescence organism is...  
 (A) Cyclospora (B) Cystoisospora  
 (C) Clostridium (D) Cutibacterium
110. Indicator used triple Sugar iron Agar media  
 (A) Phenol red (B) Neutral red  
 (C) Bromothymol blue (D) Methyl Red
111. Which modification of PCR is used for syndrome approach  
 (A) Nested PCR  (B) Multiplex PCR  
 (C) Real time PCR (D) Reverse-transcriptase PCR
112. Northern blotting is used for separation of  
 (A) DNA  (B) RNA  
 (C) Protein (D) None of the above
113. The following have the intracellular survival strategy of Adaptation to cytoplasmic replication  
 (A) Chlamydia species (B) Coxiella species  
 (C) Rickettsia (D) Legionella species
114. Which of the following is correct for Passive immunity  
 (A) Memory present  (B) No lag period  
 (C) Booster dose is useful (D) Induced by infection
115. Germ tube test is diagnostic for...  
 (A) Candida albicans (B) Cryptococcus  
 (C) Coccidioides (D) Mucor
116. Immunoglobulin (Ig) constitutes \_\_\_\_\_% of total serum proteins  
 (A) 10-15% (B) 30-40%  
 (C) 70-75%  (D) 20-25%
117. Hinge region of Immunoglobulin is rich in....  
 (A) Proline (B) Glycine  
 (C) Valine (D) Leucine
118. Valency of IgE antibody...  
 (A) 2 (B) 4  
 (C) 10 (D) 15
119. \_\_\_\_\_ deficiency is often associated with septicemia  
 (A) IgG  (B) IgM  
 (C) IgE (D) IgA
120. Secretory component is present in  
 (A) IgG (B) IgM  
 (C) IgE  (D) IgA
121. Schick test is example of...  
 (A) Precipitation (B) Complement Fixation test  
 (C) Agglutination  (D) Neutralization

122. *Corynebacterium diphtheriae* arranged in....  
 (A) Cuneiform pattern (B) Palisade pattern  
 (C) Chains (D) Pairs
123. Decreasing order of Immunoglobulines in complement fixation...  
 (A) IgM > IgG3 > IgG1 > IgG2 (B) IgG3 > IgG2 > IgG1 > IgM  
 (C) IgG1 > IgG2 > IgG3 > IgG1 (D) IgM > IgG1 > IgG2 > IgG3
124. Mantle area of Lymph node contain....  
 (A) T cells (B) Naive T cells  
 (C) Activated B cells (D) None of the above
125. Macrophage present in placenta is...  
 (A) Histiocytes (B) Hofbauer cells  
 (C) Epithelioid cells (D) Langhans giant cells
126. Diseases associated with type III hypersensitivity reaction are all except  
 (A) Grave's Disease (B) Systemic lupus erythematosus  
 (C) Serum sickness (D) Polyarteritis nodosa
127. Chronic granulomatous disease is due to defect in...  
 (A) T cell (B) B cell  
 (C) Phagocytosis (D) Complement
128. B-cell defect predisposes to the following infection, except...  
 (A) Giardiasis (B) Streptococcus pneumoniae  
 (C) Candida (D) Staphylococcus aureus
129. All of the following vaccines are given at birth except  
 (A) DPT (B) BCG  
 (C) OPV (D) Hepatitis B
130. All are Cellular fraction vaccine : except  
 (A) Meningococcal vaccine (B) Pneumococcal vaccine  
 (C) Hib vaccine (D) Hepatitis B vaccine
131. Coagulation reaction is mediated by which component of *S. aureus*  
 (A) Peptidoglycan (B) Teichoic Acid  
 (C) Protein A (D) Microcapsule
132. which is not a selective medium for *Staphylococcus*  
 (A) Mannitol salt agar with 7.5% NaCl (B) Salt milk agar  
 (C) Tinsdale medium (D) Ludlam's Medium
133. \_\_\_\_\_ is an effective fungicide(algicide) in lakes & swimming pools  
 (A) Mercury salts (B) Thiomersal  
 (C) Copper sulfate (D) Mercurochrome
134. Which is not a property of *Streptococcus pneumoniae*?  
 (A) Bile solubility (B) Animal Pathogenicity in Mice  
 (C) Optochin sensitivity (D) Growth in presence of 1.5% bile

135. Post streptococcal glomerulonephritis: which antibody level is raised  
 (A) Anti streptolysin O antibodies                      (B) Anti Dnase B antibodies  
 (C) Anti hyaluronidase antibodies                      (D) Anti streptokinase antibodies
136. Draughtsman colonies on Blood agar produced by:  
 (A) Streptococcus pneumoniae                      (B) Viridans streptococci  
 (C) Enterococcus                      (D) Streptococcus agalactiae
137. All of the following meningococcal serogroups cause invasive disease, except:  
 (A) X                      (B) Y  
 (C) D                      (D) A
138. Production of 'Daisy head' colonies on Pottasium Tellurite Agar by \_\_\_\_\_ biotype of Corynebacterium diphtheria  
 (A) Gravis                      (B) Mitis  
 (C) Intermedius                      (D) None of the above
139. Demonstration of flagella can be done by..  
 (A) Craigie tube method                      (B) Hanging drop method  
 (C) Tannic acid staining                      (D) All of the above
140. Production of early metachromatic granules can be seen best in which of the following media  
 (A) Blood agar                      (B) LJ media  
 (C) Loeffler's serum slop                      (D) Tinsdale medium
141. "Wool sorter's" disease is a name used for  
 (A) Cutaneous anthrax                      (B) Pulmonary anthrax  
 (C) Malignant malenoma                      (D) Carbuncle
142. A positive tuberculin test is an example of:  
 (A) Type I hypersensitivity                      (B) Type II hypersensitivity  
 (C) Type III hypersensitivity                      (D) Type IV hypersensitivity
143. Selective medium for Bacillus cereus  
 (A) Ludlam's Medium  
 (B) Salt milk agar  
 (C) Stuart's medium  
 (D) Polymyxin B, egg yolk, mannitol, bromothymol blue and agar
144. Neonatal tetanus also known as...  
 (A) 8th day disease                      (B) 3rd day disease  
 (C) 5th day disease                      (D) 10th day disease
145. The largest virus in size is?  
 (A) Parvovirus                      (B) Poxvirus  
 (C) Corona virus                      (D) Ebola virus
146. Hansen's bacilli also known as...  
 (A) Listeria                      (B) Mycobacterium leprae  
 (C) Bacillus cereus                      (D) Clostridium tetani

147. Reconstitution of lyophilized form of BCG vaccine done by....  
 (A) Distilled water (B) Normal saline  
 (C) Autoclave water (D) None of the above
148. Causative agent of buruli ulcer...  
 (A) Mycobacterium celatum (B) Mycobacterium scrofulaceum  
 (C) Mycobacterium ulcerans (D) Mycobacterium xenopi
149. Negative acute phase reactant proteins are all, except..  
 (A) albumin (B) transferrin  
 (C) haptoglobin (D) antithrombin
150. Which of the following s a feature of primary pulmonary tuberculosis?  
 (A) Assmann focus (B) Simon's focus  
 (C) Ranke complex (D) Cavity formation
151. Which of the following actinomycete is partially acid-fast  
 (A) Streptomyces (B) Actinomadura  
 (C) Nocardia (D) Actinomyces
152. "Whale finger" seen with....  
 (A) Staphylococcal infection (B) Streptococcal infection  
 (C) Erysipelothrix infection (D) None of the above
153. All are catalase producing organism, except...  
 (A) Shigella flexneri (B) Shigella dysenteriae type-1  
 (C) Shigella sonnei (D) Shigella dysenteriae type-2
154. Late lactose fermenter is....  
 (A) Shigella flexneri (B) Shigella dysenteriae type-1  
 (C) Shigella sonnei (D) Shigella boydii
155. Wasserman test is example of...  
 (A) Precipitation (B) Complement Fixation test  
 (C) Agglutinaion (D) Neutralization
156. \_\_\_\_\_ produces pale colony on Sorbitol MacConkey agar  
 (A) Enterohemorrhagic E. coli. (B) Enterotoxigenic E. coli  
 (C) Enteroinvasive E. coli (D) Enteropathogenic E. coli
157. Which species of Citrobacter is H<sub>2</sub>S positive  
 (A) C. freundii (B) C. koseri  
 (C) C. amalonaticus (D) None of the above
158. While drafting a scientific paper, literature review is useful on the following section, except...  
 (A) Introduction (B) Methods  
 (C) Results (D) Discussion
159. Plague is transmitted by...  
 (A) Soft tick (B) Rat flea  
 (C) Hard tick (D) Louse

160. Most common cause of Scombroid poisoning is...  
 (A)  Morganella (B) Klebsiella specise  
 (C) Pseudomonas species (D) E.coli
161. Parasite which may be transmitted by sexual contact is...  
 (A) Trypanosoma cruzi (B) Trypanosoma bruei  
 (C)  Trichomons vaginalis (D) Ascaris
162. All of the following salmonellae are motile,except...  
 (A) S.Typhi (B) S.Enteritidis  
 (C)  S.Gallinarum (D) S.Chester
163. All of the following produce yellow coloured colony on TCBS, except....  
 (A) Vibrio cholerae (B)  Vibrio parahaemolyticus  
 (C) Vibrio vulnificus (D) Vibrio alginolyticus
164. Which of the following does not grow on MacConkey agar?  
 (A) Burkholderia pseudomallei (B)  Burkholderia mallei  
 (C) Acinetobacter (D) None of the above
165. Which of the following virus is enveloped  
 (A) Parvovirus (B) Adenovirus  
 (C)  Herpes virus (D) papova virus
166. Cetrimide agar is a selective media for...  
 (A) E.coli (B) Klebsiella species  
 (C)  Pseudomonas species (D) Proteus species
167. Ashdown's medium is a selective media for...  
 (A)  Burkholderia pseudomallei (B) Pseudomonas species  
 (C) Acinetobacter (D) Listeria
168. Which one of the following vaccine is contraindicated in pregnancy?  
 (A)  Oral polio vaccine (B) semple vaccine  
 (C) BPL vaccine (D) HBsAg vaccine
169. \_\_\_\_\_ is also known as Pfeiffer's bacillus  
 (A) Burkholderia pseudomallei (B)  Haemophilus influenzae  
 (C) Acinetobacter (D) Listeria
170. HACEK group includes all, except...  
 (A) Kingella kingae (B) Eikenella corrodens  
 (C)  Haemophilus influenzae (D) Aggregatibacter species
171. Which is the highly infective stage in whooping cough?  
 (A)  Catarrhal stage (B) Paroxysmal stage  
 (C) Convalescent stage (D) All of the above
172. Malta fever is also called as...  
 (A) Relapsing fever (B)  Undulant fever  
 (C) Hemorrhagic fever (D) Rat bite fever



173. Common name of *Trichuris trichiura* is...
- (A) Pin worm (B) Round worm  
(C) Hookworm (D) Whipworm
174. Bejel is caused by...
- (A) *Borrelia recurrentis* (B) *Treponema endemicum*  
(C) *Treponema pallidum* (D) *Treponema carateum*
175. All are eukaryotes except
- (A) Fungi (B) Parasites  
(C) Blue green algae (D) Plants
176. Chlamydiae- all are true, except...
- (A) Obligate intracellular (B) They can be grown in artificial media  
(C) Produce intracytoplasmic inclusions (D) Multiply by binary fission
177. Fried egg colonies are produced by...
- (A) *Bacillus cereus* (B) *Haemophilus influenzae*  
(C) *Neisseria* species (D) *Mycoplasma pneumoniae*
178. Bacterial Vitamin required for growth of *Leuconostoc* species is.....
- (A) Cyanocobalamin (B) Biotin  
(C) Folic acid (D) Pyridoxine
179. Spherical and terminal spores seen in...
- (A) *Clostridium bifermentans* (B) *Clostridium perfringens*  
(C) *Clostridium tetani* (D) *Clostridium tertium*
180. Final disposal option for microbiology laboratory waste is...
- (A) Pre-treated to sterilize with non-chlorinated chemicals+ incineration  
(B) Autoclaving  
(C) Dry heat Sterilization  
(D) Plasma pyrolysis
181. In 2016, the WHO launched “The End TB Strategy by \_\_\_\_\_”
- (A) 2030 (B) 2035  
(C) 2040 (D) 2025
182. Which of the following virus is DNA virus...
- (A) Rubella virus (B) Cytomegalo virus  
(C) West Nile virus (D) Marburg virus
183. Size of Corona virus...
- (A) 120-160 nm (B) 40-60 nm  
(C) 200-250 nm (D) 15-20 nm
184. Which of the following virus transmitted through placenta to fetus, without congenital manifestation
- (A) Rubella virus (B) Cytomegalo virus  
(C) Parvovirus (D) Measels virus

185. Suckling mice are used for isolation of...  
 (A)  Cocksackievirus (B) HIV  
 (C) Hepatitis B virus (D) Polio virus
186. All of the following are Primary cell lines, except...  
 (A) Monkey kidney cell line (B) Human amnion cell line  
 (C) Chick embryo cell line (D)  Baby hamster kidney cell line.
187. Both intranuclear and intracytoplasmic inclusion bodies are seen in...  
 (A)  Cytomegalovirus (B) Rabies virus  
 (C) Polio virus (D) Adeno virus
188. Struvite stones in bladder caused by...  
 (A) E.coli (B) Klebsiella species  
 (C) Pseudomonas species (D)  Proteus species
189. Perinuclear cytoplasmic inclusion body is seen in...  
 (A)  Reovirus (B) Rabies virus  
 (C) variola virus (D) fowlpox virus
190. Shape of Ebola virus is...  
 (A) Bullet (B) Rod  
 (C)  Filamentous (D) Brick
191. Shingles caused by  
 (A) Cytomegalo virus (B) Rhadinovirus  
 (C) Roseola virus (D)  varicella zoster virus
192. Second most common cause of corneal blindness is  
 (A) Trauma (B)  HSV-1 infection  
 (C) Leprosy (D) Trachoma
193. Most common fungus causing orbital cellulitis in a patient with diabetic ketoaidosis  
 (A) Aspergillus (B) Candida  
 (C)  Mucor (D) Cryptococcus
194. Asteroid bodies is observed in...  
 (A) Candidiasis (B) Histoplasmosis  
 (C) Mucor mycosis (D)  Sporotrichosis
195. Tinea versicolor caused by...  
 (A) Candida albicans (B) Trichophyton rubrum  
 (C) Trichophyton violaceum (D)  Malassezia furfur
196. Trichothecenes mycotoxin s produced by...  
 (A)  Fusarium graminearum (B) Trichophyton violaceum  
 (C) Aspergillus flavus (D) Penicillium puberulum
197. Parasite that need only one host...  
 (A) Trypanosoma cruzi (B)  Ascaris  
 (C) Taenia species (D) Leishmania species

198. Bacteria mediated endocytosis is observed in...
- (A) Salmonella (B) Shigella  
(C) Listeria (D) E.coli
199. Covaxin consist of...
- (A) Complete infective SARS-CoV-2 (B) Only RNA  
(C) Only envelope protein (D) Only spike protein
200. Blood bags should be segregated in which colour bag according to Biomedical Waste Rule 2016.
- (A) Yellow (B) Red  
(C) White (D) Blue