



BOOKLET SR. NO.
0105

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Microbiology



સમય : 50 મિનિટ Time : 50 Minutes
કુલ પ્રશ્નો : 100 Total Que. : 100
કુલ ગુણ : 100 Total Marks : 100

ઉમેદવારનો સીટ નંબર

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ઉમેદવારોને સૂચના

- (01) આ પ્રશ્નપુસ્તિકામાં કુલ 100 પ્રશ્નો છે. દરેકના સરખા ગુણ છે. બધા પ્રશ્નોના જવાબ આપો. તમારા કુલ ગુણનો આધાર તમે જેટલા સાચા ઉત્તરો આપ્યા હશે તેની સંખ્યા ઉપર રહેશે.
- (02) 1થી 100 પ્રશ્નો પૂરેપૂરા છપાયેલા છે કે કેમ? તેની પ્રથમ ખાતરી કરી લો. જો પ્રશ્નો પૂરા છપાયા ન હોય અથવા કોઈ પૃષ્ઠ ફાટેલું હોય કે કોઈ પૃષ્ઠ સામેલ ન હોય (Missing) તો તુરત જ પ્રશ્નપુસ્તિકા નિરીક્ષક પાસેથી અચૂક બદલાવી લેવી.
- (03) આ પાના ઉપર આપનો બેઠક નંબર લખો.
- (04) આપ કોઈના ઉત્તરની નકલ કરશો નહિ, તેમજ આપના ઉત્તરની નકલ કરવા દેશો નહિ.
- (05) પરીક્ષાર્થીઓને પરીક્ષાખંડ/હોલમાં, પ્રવેશપત્ર સિવાય કોઈ પણ પ્રકારના હસ્તલિખિત, છાપેલ પુસ્તક કે કાગળની ચિઠ્ઠી, પેપર, મોબાઈલ-સેલફોન કે કોઈ પણ પ્રકારના ઇલેક્ટ્રોનિક સાધનો લઈ જવાની કે ઉપયોગ કરવાની અનુમતિ નથી.
- (06) પ્રશ્નોના જવાબો અલગ જવાબવહીમાં આપવાના રહેશે. જેને માટે નિરીક્ષક દ્વારા આપને કોમ્પ્યુટરાઈઝડ ખાસ પ્રકારની જવાબવહી આપવામાં આવશે. ઉમેદવારને જવાબવહી મળ્યા બાદ જો તેઓ દ્વારા તેનો નાશ કરવામાં આવશે કે ગુમ કરવામાં આવશે તો ઉમેદવાર ફોજદારી ગુનાને પાત્ર બનશે. સૌ પ્રથમ આપે જવાબવહી ઉપર દર્શાવેલ નિયત ખાનામાં (English) અંગ્રેજીમાં પરીક્ષાનું નામ, પરીક્ષાની તારીખ, કેન્દ્ર, જન્મતારીખ, પરીક્ષાર્થીનું નામ (અટક પહેલાં લખવી), રોલ નંબર (બેઠક નંબર) તથા વિષય ફક્ત ભૂરી (Blue) અથવા કાળી (Black) શાહીની બોલપેનથી (English) અંગ્રેજીમાં લખીને નિયત ખાનામાં પોતાની સહી કરવાની રહેશે. આ વિગતોની ચકાસણી બાદ નિરીક્ષક તેમની સહી કરશે. જો વિગતો ભરવામાં નહિ આવે તો આપની જવાબવહીનું મૂલ્યાંકન કરવામાં આવશે નહિ અને શૂન્ય ગુણ આપવામાં આવશે. જવાબવહીના પાછળના ભાગમાં રોલ નંબર (બેઠક નંબર), પ્રશ્નપુસ્તિકા સીરીઝ અને પ્રશ્નપુસ્તિકા નંબરના ખાનામાં લાગુ પડતી સાચી વિગતો ફક્ત ભૂરી અથવા કાળી શાહીની બોલપેનથી જ વર્તુળ પૂરેપૂરું ડાર્ક કરીને (encode) કરીને આપવી.

- (07) આ પ્રશ્નપત્રના બધા પ્રશ્નો હેતુલક્ષી છે. દરેક પ્રશ્નના ઉત્તરમાં A, B, C, D વિકલ્પો આપેલા છે. તેમાંથી સાચો વિકલ્પ શોધી જવાબવહીમાં સંબંધિત પ્રશ્નના ક્રમ નીચે આપેલ A, B, C કે Dના વર્તુળને પૂરેપૂરું ભૂરી/કાળી શાહીની બોલપેનથી ડાર્ક કરવું. આ સિવાયની કોઈ પણ કલરની શાહીની બોલપેનથી જવાબો આપ્યા હશે તે જવાબવહી તપાસવામાં આવશે નહિ અને આપોઆપ “શૂન્ય” ગુણ આપવામાં આવશે. એકવાર ડાર્ક કરેલ જવાબને બદલી શકાશે નહિ.

ઉદાહરણ તરીકે :

ભારતનું કયું રાજ્ય સૌથી લાંબો દરિયા કિનારો ધરાવે છે ?

(A) (B) (C) (D)

- (A) મહારાષ્ટ્ર (B) તામીલનાડુ
(C) ગુજરાત (D) આંધ્રપ્રદેશ

આ ઉદાહરણમાં સાચો જવાબ (C) છે. આથી (C)નું વર્તુળ ડાર્ક (encode) કરેલ છે. ઉમેદવારોએ જવાબમાં “ગુજરાત” લખવું નહિ.

- (08) એક જ પ્રશ્ન માટે જો જવાબવહીમાં એકથી વધુ વિકલ્પ આપે આપેલા હશે તો તે જવાબ માટે ગુણ આપવામાં આવશે નહિ.
- (09) આ જવાબવહી કોમ્પ્યુટર દ્વારા તપાસવાની હોવાથી તે વળે, ફાટે કે બગડે નહિ તેની ખાસ કાળજી રાખવી. પ્રશ્નપુસ્તિકામાં કોરી જગ્યામાં રફકામ કરવું. તે માટે અલગ કાગળ આપવામાં આવશે નહિ. જવાબવહીમાં કંઈ પણ રફવર્ક કરવું નહિ. પ્રશ્નપુસ્તિકામાં જવાબો લખવાની મનાઈ છે.
- (10) પ્રશ્નપુસ્તિકાના કોઈ પૃષ્ઠ ફાડવાં કે જુદાં કરવાની મનાઈ છે.
- (11) પરીક્ષાખંડ છોડતા પૂર્વે જવાબવહી (OMR Answer Sheet) નિરીક્ષકને સોંપવી, જ્યારે પ્રશ્નપુસ્તિકા ઉમેદવારો લઈ જઈ શકશે.
- (12) આ સૂચનાઓના અનાદર માટે ઉમેદવાર સામે શિક્ષાત્મક કાર્યવાહી કરવામાં આવશે.

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Microbiology

- 1 Biological control used in an autoclave is the spores of :
(A) *Bacillus stearothermophilus*
(B) *Clostridium welchii*
(C) *Bacillus cereus*
(D) *Clostridium histolyticum*
- 2 Glutaraldehyde is useful for sterilization of :
(A) Cystoscopes (B) Bronchoscopes
(C) Plastic materials (D) All of the above
- 3 Premunition (Infection-immunity) is seen in :
(A) Tuberculosis (B) Whooping cough
(C) Enteric Fever (D) Malaria
- 4 Which of the following is/are example/s of lysogenic conversion ?
(A) Production of diphtheria toxin
(B) Production of Dick toxin
(C) Both of the above
(D) None of the above
- 5 Wheal and flare response is characteristic of :
(A) Type I hypersensitivity reaction
(B) Type II hypersensitivity reaction
(C) Type III hypersensitivity reaction
(D) Type IV hypersensitivity reaction
- 6 Catalase production is negative in :
(A) *Staphylococcus* (B) *Streptococcus*
(C) *Proteus* (D) *Salmonella*
- 7 Which of the following bacteria is/are found normally in the conjunctival sac ?
(A) *Corynebacterium xerosis*
(B) *Pseudomonas aeruginosa*
(C) *Streptococcus pneumoniae*
(D) All of the above

- 8 Which of the following vaccines is/are prepared from live microbes manipulated and attenuated ?
 (A) BCG vaccine (B) Oral polio vaccine
 (C) Measles vaccine (D) All of the above
- 9 In presumptive coliform count of water, it is considered satisfactory if the count is :
 (A) 0 (B) 1-3
 (C) 4-10 (D) 10-15
- 10 Which of the following agents is a third generation cephalosporin ?
 (A) Cephalexin (B) Cephalothin
 (C) Cefotaxime (D) Cefoxitin
- 11 Which of the following is expressed only by B cells ?
 (A) CD 3 (B) CD 64
 (C) CD 19 (D) CD 66
- 12 Fungal infection/s frequently observed in HIV disease is/are :
 (A) Candidiasis (B) Cryptococcosis
 (C) Aspergillosis (D) All of the above
- 13 Which HIV testing strategy is used for blood transfusion safety ?
 (A) I (B) II
 (C) III (D) None of the above
- 14 HIV belongs to family :
 (A) Retroviridae (B) Bunyaviridae
 (C) Filoviridae (D) None of the above
- 15 Following are the examples of reemerging infections except:
 (A) Malaria (B) Plague
 (C) AIDS (D) Ebola haemorrhagic fever.
- 16 The inoculum for antibiotic sensitivity by disc diffusion method should contain :
 (A) 10^4 cfu/ml (B) 10^5 cfu/ml
 (C) 10^6 cfu/ml (D) 10^7 cfu/ml

- 17 Which of the following mosquitoes act as the vector of chikungunya virus ?
(A) Aedes (B) Anopheles
(C) Culex (D) Culiseta
- 18 Mark the congenital abnormalities which is/are seen in infants born to women infected with rubella ?
(A) Neurosensory deafness (B) Congenital heart disease
(C) Retinopathy (D) All of the above
- 19 MMR vaccine is :
(A) A live attenuated vaccine
(B) A killed vaccine
(C) A subunit vaccine
(D) A synthetic peptide vaccine
- 20 Which of the following bacteria is/are acid fast ?
(A) Actinomyces (B) Nocardia
(C) Streptomyces (D) All of the above
- 21 Weil - Felix test is negative in :
(A) Epidemic typhus (B) Endemic typhus.
(C) Spotted fevers (D) Q fever
- 22 Which of the following genera can hydrolyze urea ?
(A) Mycoplasma (B) Ureaplasma
(C) Acholeplasma (D) All of the above
- 23 Which of the following virus is not arthropod - borne ?
(A) Bunyavirus (B) Phlebovirus
(C) Hanta virus (D) Dengue Virus
- 24 What is the shape of rabies virus ?
(A) Spherical (B) Polygonal
(C) Bullet - shaped (D) Tubular

- 25 Which of the following conditions can be caused by infection with mumps virus ?
 (A) Swelling of parotid glands
 (B) Orchitis
 (C) Meningoencephalitis
 (D) All of the above
- 26 Which of the following agents is the commonest cause of infective endocarditis ?
 (A) Staphylococcus epidermidis
 (B) Candida spp
 (C) Viridans group of Streptococci
 (D) Coliforms
- 27 Which of the agents can cause diarrhoea ?
 (A) Rotavirus (B) Vibrio cholerae
 (C) S. typhimurium (D) All of the above
- 28 Type I hypersensitivity reaction is mediated by :
 (A) Ig E (B) Ig G
 (C) Ig M (D) Ig D
- 29 Which of the following mosquitoes acts as vector for JE virus ?
 (A) Culex (B) Aedes
 (C) Anopheles (D) All of the above
- 30 _____ is/are associated with development of Hepatocellular carcinoma :
 (A) Hepatitis B virus (B) Hepatitis E virus
 (C) Hepatitis C virus (D) All the above
- 31 What type of nucleic acid is present in hepatitis B virus ?
 (A) SS DNA (B) DS DNA.
 (C) SS RNA. (D) DS RNA.
- 32 Which of the following agents is/are prions ?
 (A) Agent causing scrapie
 (B) Agent causing kuru
 (C) Agent causing Creutzfeldt - Jakob disease
 (D) All of the above

- 33 Incineration is an efficient method for :
 (A) Destroying contaminated materials
 (B) Sterilizing points of forceps
 (C) Sterilizing scalpel blades and needles
 (D) Sterilizing all glass syringes
- 34 Which of the following fungi cannot be cultured ?
 (A) Sporotrichium (B) Rhinosporidium
 (C) Madurella (D) Phialophora
- 35 Pathogenic *C. neoformans* can be differentiated from non-pathogenic species by :
 (A) Growth at 37° C
 (B) Urea hydrolysis
 (C) Production of brown colonies on niger seed agar
 (D) All of the above
- 36 Burkitt's lymphoma is malignant _____ lymphoma :
 (A) B cell (B) T cell
 (C) Monocytosis (D) None of the above
- 37 Microconidia are absent in :
 (A) Trichophyton (B) Microsporum
 (C) Epidermophyton (D) None of the above.
- 38 Kyasanur Forest disease is seen in :
 (A) Gujarat (B) Maharashtra
 (C) Andhra Pradesh (D) Karnataka
- 39 Hepatitis E virus belong to family :
 (A) Flaviviridae (B) Calciviridae
 (C) Hepadnaviridae (D) Deltavirus
- 40 For Weil - Felix reaction antigen is prepared from _____
 (A) *E. coli* (B) *Proteus*
 (C) *Pseudomonas* (D) None of the above

- 41 Which of the following dematophytes can infect skin, hair and nails ?
 (A) Trichophyton (B) Microsporum
 (C) Epidermophyton (D) None of the above
- 42 Nosopharyngeal carcinoma is associated with :
 (A) EBV (B) Hepatitis B
 (C) Polio virus (D) None of the above
- 43 Contaminated needle prick can cause :
 (A) Hepatitis C (B) HIV
 (C) Hepatitis B (D) All of the above
- 44 Zoonotic disease are :
 (A) Bubonic plague (B) Rabies
 (C) Hydatid disease (D) All of the above
- 45 Dysentery is caused by :
 (A) Shigella (B) E. histolytica.
 (C) Enteroinvasive E. coli (D) All of the above
- 46 Milk ring test is used in diagnosis of :
 (A) Brucellosis (B) Q. fever
 (C) Salmonellosis (D) Tuberculosis
- 47 Gram negative anaerobic cocci are :
 (A) Sarcina (B) Veillonella
 (C) Peptococci (D) All of the above
- 48 Toxoids are used for immunization against :
 (A) Tetanus (B) Diphtheria
 (C) Both of the above (D) Neither of the above
- 49 Who is known as "Father of Bacteriology" ?
 (A) Louis Pasteur (B) Robert Koch
 (C) Joseph Lister (D) Antony van leeuwenhoek

- 50 The period between inoculation of bacteria in a culture medium and beginning of multiplication is known as :
(A) Stationary phase (B) Lag phase
(C) Log phase (D) Decline phase
- 51 Screening test for Syphilis is :
(A) Kahn test
(B) RPR test
(C) Dark ground microscopy
(D) All of the above
- 52 All the members of the _____ family are Oxidase negative.
(A) Enterobacteriaceae (B) Arenaviridae
(C) All of the above (D) None of the above
- 53 Number of proteins in the complement system is :
(A) 5 (B) 7
(C) 9 (D) 11
- 54 Major histocompatibility complex in man is known as :
(A) H - 2 complex (B) HLA complex
(C) Both of the above (D) None of the above
- 55 In Widal test, the significant titres of H agglutinin is :
(A) 1 : 50 or more (B) 1 : 100 or more
(C) 1 : 200 or more (D) 1 : 400 or more
- 56 Chancroid is caused by :
(A) Haemophilus influenzae
(B) Haemophilus aegyptius
(C) Haemophilus ducreyi
(D) Haemophilus parainfluenzae
- 57 The causative agent/s of gas gangrene is/are :
(A) Clostridium perfringens
(B) Clostridium novyi
(C) Clostridium septicum
(D) All of the above

- 58 Traveller's diarrhoea is caused by :
(A) Enteropathogenic *E. coli*
(B) Enterotoxigenic *E. coli*
(C) Enteroinvasive *E. coli*
(D) Vero cytotoxin producing *E. coli*
- 59 Which of the following exotoxin is most toxic ?
(A) Botulinum toxin (B) Tetanus toxin
(C) Diphtheria toxin (D) Cholera toxin
- 60 Lactobacilli constitute the normal flora of :
(A) Adult vagina
(B) Prepubertal vagina
(C) Post - menopausal vagina
(D) All of the above
- 61 Which of the following animal models can be used for cultivation of *Mycobacterium leprae* ?
(A) Mouse foot pad (B) Nine - banded armadillos
(C) Both of the above (D) None
- 62 Which of the following bacteria is/are associated with food poisoning due to consumption of sea fish ?
(A) *Vibrio parahaemolyticus* (B) *Vibrio alginolyticus*
(C) *Vibrio vulnificus* (D) All of the above
- 63 In enteric fever, *Salmonella* may be isolated from :
(A) Urine (B) Faeces
(C) Blood (D) All of the above
- 64 BCG vaccine is a :
(A) Live attenuated preparation
(B) Killed preparation
(C) Toxoid preparation
(D) Recombinant preparation
- 65 Which of the following is/are nonsense codon/s ?
(A) UAA (B) UAG
(C) UGA (D) All of the above

- 66 False negative mantoux test is observed in :
 (A) Early tuberculosis
 (B) Advanced tuberculosis
 (C) Miliary tuberculosis
 (D) All of the above
- 67 Which of the following type of leprosy is the most infectious ?
 (A) Lepromatous leprosy
 (B) Tuberculoid leprosy
 (C) Borderline tuberculoid leprosy
 (D) Mild - borderline leprosy
- 68 Which of the following conditions can be caused by *Plesiomonas* ?
 (A) Gastroenteritis (B) Septicaemia
 (C) Cellulites (D) All of the above
- 69 Food poisoning strains of *Clostridium perfringens* belong to :
 (A) Type A (B) Type B
 (C) Type C (D) Type D
- 70 Usual dose of purified protein derivative in Mantoux test is :
 (A) 5 IU (B) 50 IU
 (C) 100 IU (D) 150 IU
- 71 Bile duct carcinoma (cholangiocarcinoma) is associated with which of the following trematodes ?
 (A) *Clonorchis sinensis* (B) *Fasciola hepatica*
 (C) *Fasciola gigantica* (D) *Schistosoma haematobium*
- 72 Polluted soil may act as a source of infection with :
 (A) *Ascaris lumbricoides*
 (B) *Ancylostoma duodenale*
 (C) *Strongyloides stercoralis*
 (D) All of the above
- 73 Modified acid fast stain is used for the diagnosis of :
 (A) *Entamoeba histolytica*
 (B) *Toxoplasma gondii*
 (C) *Cryptosporidium parvum*
 (D) *Leishmania donovani*

- 74 Diarrhoea in AIDS patients may be caused by :
 (A) *Cryptosporidium parvum*
 (B) *Microsporidia*
 (C) *Isospora belli*
 (D) All of the above
- 75 Cestodes differs from trematodes in :
 (A) Tape - like segmented body
 (B) Prescence of suckers often with hooks
 (C) Absence of alimentary canal
 (D) All of the above
- 76 Larval form of *Echinococcus granulosus* is seen in :
 (A) Dog (B) Man
 (C) Wolf (D) Fox
- 77 Visceral larva migrans is caused by the migrating larva/e of which of the following worms ?
 (A) *Gnathostoma spinigerum*
 (B) *Anisakis simplex*
 (C) *Toxocara canis*
 (D) All of the above
- 78 The parasite which has been recently eradicated from India is :
 (A) *Leshmania donovani* (B) *Dracaunculus medinensis*
 (C) *Babesia microti* (D) *Toxoplasma gondii*
- 79 Quantitative buffy coat assay to detect parasites using fluorescent microscope is a test available to diagnose :
 (A) Malaria parasite (B) Filarial larvae
 (C) Both of the above (D) None of the above
- 80 All of the following parasites inhibit ocular tissues except :
 (A) *Thelazia callipaeda* (B) *Onchocerca volvulus*
 (C) *Loa loa* (D) *Mansonella streptocerca*
- 81 Which type of haemolysis is produced by *Streptococci pyogenes* ?
 (A) α - haemolysis (B) β - haemolysis
 (C) γ - haemolysis (D) No haemolysis

- 82 Which of the following dermatophytes is the most common species infecting man ?
 (A) *Trichophyton rubrum*
 (B) *Trichophyton schoenleinii*
 (C) *Trichophyton mentagrophytes*
 (D) *Microsporum canis*
- 83 Which is the infective form of *Giardia lamblia* ?
 (A) Trophozoite (B) Cyst
 (C) Both of the above (D) None of the above
- 84 For malaria infection of mosquito, the blood of human carrier must contain atleast :
 (A) 6 Gametocytes / uL
 (B) 8 Gametocytes / uL
 (C) 10 Gametocytes / uL
 (D) 12 Gametocytes / uL
- 85 Maurer's dots in red cells are seen in infection with :
 (A) *Plasmodium vivax* (B) *Plasmodium falciparum*
 (C) *Plasmodium malariae* (D) *Plasmodium ovale*
- 86 In which of the following cestodes man can act as intermediate host ?
 (A) *Taenia saginata*
 (B) *Taenia solium*
 (C) *Diphyllobothrium latum*
 (D) *Hymenolepis nana*
- 87 Which of the following parasite lays eggs containing larvae ?
 (A) *Trichinella spiralis*
 (B) *Brugia malayi*
 (C) *Enterobius vermicularis*
 (D) *Ascaris lumbricoides*
- 88 Which of the following techniques is used in Estimation of Viral load ?
 (A) PCR (B) Real time PCR
 (C) DNA probes (D) None of the above

- 89 Pneumococcal capsule can be demonstrated by :
(A) Quellung reaction (B) Negative staining
(C) Both of the above (D) None of the above
- 90 Naegleria fowleri causes :
(A) Primary amoebic meningoencephalitis
(B) Granulomatous amoebic encephalitis
(C) Keratitis
(D) All of the above
- 91 Megaloblastic anemia is seen in :
(A) Hookworm disease (B) Malaria
(C) Diphyllbothriasis (D) All of the above
- 92 Anti - Rh antibodies are :
(A) Ig M type (B) Ig G type
(C) Ig A type (D) Ig E type
- 93 Myeloperoxidase deficiency is a defect of :
(A) B cells (B) T cells
(C) Complement (D) Phagocytes
- 94 Outbreaks of emetic syndrome after consumption of fried rice is associated with :
(A) Bacillus cereus (B) Bacillus subtilis
(C) Bacillus anthracis (D) Clostridia
- 95 Post streptococcal disease are diagnosed by :
(A) Widal test (B) Coagulase test
(C) ASO test (D) All of the above

- 96 Media containing crystal violet is used to grow :
(A) Staphylococcus (B) Streptococcus
(C) Pneumococcus (D) All of the above
- 97 Hyaluronidase enzyme is produced by :
(A) Staphylococci (B) Clostridium
(C) Streptococci (D) All of the above
- 98 Strepto. Pyogenes can be differentiated from other haemolytic streptococci on the basis of sensitivity to :
(A) Penicillin (B) Bacitracin
(C) Erythromycin (D) Aminoglycosides
- 99 Aminoglycosides interfere with :
(A) Cell wall synthesis (B) Cell membrane function
(C) Protein synthesis (D) DNA function
- 100 The causative agent/s of non-gonococcal urethritis is/are :
(A) Chlamydia trachomatis (B) Ureaplasma urealyticum
(C) Trichomonas vaginalis (D) All of the above
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