

Total Marks : 100

Time : 01:00 pm to 02.30 pm

- 1) All questions are compulsory.
- 2) Each question carries 1 mark.
- 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
- 4) Follow the instructions given on OMR sheet.
- 5) Rough work shall be done on the sheet provided at the end of question paper.

- 1 : 18

4.can't synthesize essential growth factors.

A) Auxotrophs	B) Autotroph
C) Heterotroph	D) Prototroph
5. % alcohol is used for disinfection.

a) 100%	c) 10%
b) 70%	d) 20%
6.is absent in procaryotic cells

A) Cell membrane
B) Nuclear membrane
C) Cell wall
D) Ribosomes
7. Mesophiles can grow in temperature range of.....

a) 0°C to 15°C	c) Above 50°C
b) 20°C to 50°C	d) None of these
8. Actinomycetes are

A) Spore producing
B) Gram negative bacteria
C) Intracellular obligate parasites
D) Lack peptidoglycan in cell wall
9. Agitation of the medium in the fermentation is done by using.....

A) Impellers	B) Baffles
C) Sparger	D) Antifoam agents
10. Phycology is the study of

A) Bacteria	B) Fungi
C) Virus	D) Algae

11. In phase of growth cell size is maximum.

A) lag	B) log
C) stationary	D) death
12. Organic chemical component required for enzyme action is called as.....

A) Coenzyme	C) Holoenzyme
B) Apo enzyme	D) Conjugate enzyme
13. Abzymes are
 - A) Enzymes that are highly specific like antibodies
 - B) Antibodies that have catalytic activities
 - C) Also referred as zymogens
 - D) Enzyme that hydrolyze antibodies
14. Zymogen is a
 - A) Active form of enzyme
 - B) Complex formed between enzyme and substrate
 - C) Inactive form of an enzyme activated by cleavage
 - D) The unfolded form of the enzyme
15. Heavy metals at picogram concentration act as.....

A) Inhibitors	C) Cofactors
B) Coenzymes	D) Apoenzymes
16. of the following is not a membrane lipid

a) Cholesterol	c) Cerebroside
b) Phosphoglyceride	d) Choline
17. Bacteria are classified under the kingdom

A) Monera	C) plantae
B) protista	D) Animalia

18. A split gene starts and ends with.....
 - A) Muton
 - B) Exon
 - C) Cistron
 - D) Intron
19. The minimal genetic unit capable of recombination is called.....
 - A) Muton
 - B) Recon
 - C) Cistron
 - D) Operon
 - D) Neutral
20. is a functional genetic unit that carries information for synthesis of protein.
 - A) Muton
 - B) Recon
 - C) Cistron
 - D) Operon
21.enzymes are used for curdling of milk during cheese production.
 - A) Amylase
 - B) Renin
 - C) Lipases
 - D) Caseinase
22. Virus free plants have been propagated commercially through.....
 - A) Apical meristem culture
 - B) Cell culture
 - C) Pollen culture
 - D) Embryo culture
23. UV light has highest microbicidal activity at nm wavelength.
 - A) 100
 - B) 265
 - C) 425
 - D) 525
24. HAART therapy used for treatment of disease.
 - A) AIDS
 - B) T.pallidum
 - C) Clostridium titani
 - D) Neisseria gonorrhoeae

25. vaccine used for prevention of Meningococcal meningitidis.
A) ACW134Y
B) ACW135Y
C) ACW136Y
D) ACW137Y
26. Tetanus spreads through.....
A) Water
B) Food
C) Soil and Dust
D) Seafoods
27. Bacteria that are unable to synthesize their own metabolites and depend on preformed organic compounds are called
A) Phototrophs
B) Chemotrophs
C) Autotrophs
D) Heterotrophs
28.is the father of antiseptic surgery.
A) Robert Koch
B) Paul Ehrlich
C) Joseph lister
D) Alexander Flemming
29.act as an organ of adhesion in bacteria
A) Flagella
B) Fimbriae
C) Capsule
D) Mesosomes
30. Heat resistant spores of non-toxigenic strains of Clostridium tetani are used to test efficacy of sterilization
A) Moist heat
B) Ionizing
C) Dry heat
D) Non of the above
31. The concentration of glutaraldehyde used in high level disinfection is..... percent.
A) 0.5
B) 1
C) 1.5
D) 2

32. Cytokines are not.....
- A) Able to induce increased blood vessel permeability
 - B) Made in response to bacterial antigens
 - C) Antigen specific
 - D) Made in response to thymus infection.
33. The most common manifestation of Penicillin drug in hypersensitive patient is.....
- A) Pernicious anemia
 - B) Autocatalytic degradation of penicillin
 - C) Penicillities
 - D) Hemolytic anaemia
34. In Myasthenia gravis blocking antibodies binds to.....
- A) Acetyl choline
 - B) Dopamine
 - C) Axons
 - D) Acetyl choline receptors
35. A complement is
- A) Group of proteolytic enzymes found in serum
 - B) Secreted by Macrophages and hepatocytes
 - C) Participates in both innate and adaptive immune responses
 - D) All of the above
36. MHC Class I molecules are important for of the following
- A) Presenting exogenous antigen to B cells
 - B) Presenting intact viral proteins to T cells
 - C) Binding to CD8 molecules on T cells
 - D) Binding to CD4 molecules on T cells

37. In bacteria of the following is not an inducer of an operon.
A) Allolactose
B) IPTG
C) Tryptophan
D) L-arabinose
38. Silent mutations in DNA are not expressed due to.....
A) Degeneracy of genetic code
B) Universality of genetic code
C) Non-ambiguous of genetic code
D) None of the above
39. Class of immunoglobulin that can get transported across epithelial cell is.....
A) IgG
B) IgE
C) IgA
D) IgM
40. When DNA is denatured by heating and then allowed to renature, there will be.....
A) A decrease in absorbance at 260nm
B) An increase in absorbance at 595nm
C) An increase in absorbance at 260nm
D) No change in absorbance at any wavelength
41. Bacitracin blocks synthesis.
A) Cell wall
B) Cell membrane
C) Protein
D) PABA
42. belongs to β -lactam group of antibiotic.
A) Cephalosporin
B) Sulphonamides
C) Polymyxin
D) Rifamycin

49. Killer cell requires for its functioning.
A) Antibodies
B) Fibronectin
C) Complement
D) Memory cells
50. cell produces antibody.
A) Megakaryocyte
B) Myeloid cell
C) B cell
D) Lymphoid cell
51. The DNA fingerprinting process involves.....
A) VNTR loci
B) Chain terminators
C) Degenerates oligonucleotides
D) RFLP's
52. Plasma cell has half life of days.
A) 1-2
B) 2-4
C) 4-6
D) 6-8
53. Memory cell has diameter ofmicron.
A) 10-14
B) 14-20
C) 20-24
D) 24-30
54. Artificial passive immunity acquired through.....
A) Hyper immune serum
B) Toxoids
C) Natural infection
D) Vaccination
55. In the production of recombinant vaccine-is used as vector.
A) Vaccinia virus
B) Vibrio spp
C) Salmonella spp
D) Shigella spp

56. In catabolism of purine nucleotides is converted to uric acid as final compound.
A) NADH
B) AMP
C) GTP
D) GMP
57. A process that breaks down large molecules into smaller ones is called.....
a) Catalysis
b) Metabolism
c) Anabolism
d) Catabolism
58. In E.coli enzyme repression of branched biosynthetic pathway, aspartic acid to aspartyl phosphate is mediated by isofunctional enzymes.
A) 1
B) 2
C) 3
D) 4
59. In nucleotide excision repair of DNA in E.coli
A) Utilizes RNA polymerase to make a primer
B) Replaces both strands of DNA in damaged region
C) Uses high energy phosphate bonds
D) Requires uvr ABC exonuclease
60. pBR322 plasmid usually used as vector for cloning gene in E.coli is.....
A) A modified bacterial plasmid
B) An original bacterial plasmid
C) a viral genome
D) a transposon
61. The principal substrate for the formation of phosphatidic acid is
A) Glycerol-2-phosphate and acyl-ACP
B) Glycerol-3-phosphate and acyl-ACP
C) Glycerol phosphate and Acyl-ACP
D) Glycerol-2-phosphate and Acetoacetate

62. The presence of a plasmid in a bacterial culture is usually determined by.....
- A) Growth in the presence of antibiotic
 - B) Blue white screening
 - C) Restriction enzyme digests
 - D) Agarose gel electrophoresis
63. During complete beta oxidation of Palmitic acid there are
- A) 7 cycles to produce 8 Acetyl CoA
 - B) 8 cycles to produce 7 Acetyl CoA
 - C) 7 cycles to produce 7 Acetyl CoA
 - D) 8 cycles to produce 8 Acetyl CoA
64. The ED pathway degrades one molecule of glucose to two pyruvate molecules and yields.....
- A) One ATP and one NADH
 - B) One ATP and two NADH
 - C) Two ATP and two NADH
 - D) One ATP and one NADH and one NADPH
65. In Lac operon, when lactose levels are high and glucose levels are low, of the following happens.
- A) cAMP levels decrease, triggering binding of CAP to RNA polymerase
 - B) cAMP activates CAP, which binds to the Lac promoter
 - C) cAMP activates CAP, which binds to the Lac repressor protein
 - D) CAP binds to the ribosome to prevent translation
66. In catabolism of purine nucleotides is converted to Guanosine by 5' nucleotidase enzyme.
- A) ATP
 - B) GTP
 - C) AMP
 - D) GMP

74. Candida is the etiological agent in all of the following except..... disease.
 - A) Endocarditis
 - B) Meningitis
 - C) Oral thrush
 - D) Mycetoma
75. Mycorrhiza is an example of
 - a. Symbiosis
 - b. Ammensalism
 - c. Predation
 - d. Parasitism
76. Thuricide 90 TS is present in form.
 - A) powder
 - B) oil
 - C) emulsion
 - D) granule
77. fungus is successful in controlling insects.
 - A) Aspergillus flavus
 - B) Aspergillus niger
 - C) Aschersonia aleyrodis
 - D) Rhizopus nigricans
78. The chemical name of thymine is.....
 - A) 2,oxy 4 aminopyrimidine
 - B) 2,4 dioxy 5 methylpyrimidine
 - C) 2,4 dioxypyrimidine
 - D) none of the above
79.protects bacteria from viruses by fragmenting viral DNA.
 - A) Endonucleases
 - B) Methylase
 - C) Ligases
 - D) Exonucleases

80.act as substrate for restriction endonuclease
- A) Double stranded DNA
 - B) Single stranded RNA
 - C) Cell wall proteins
 - D) Peptidoglycan
81. Transposons are also known as.....
- A) Episomes
 - B) Plasmids
 - C) Jumping genes
 - D) Split genes
82. Eastern blotting can be considered as an extension of biochemical techniques of.....
- A) Northern blotting
 - B) Southern blotting
 - C) Eastern blotting
 - D) Western blotting
83. The LAMP assay method of amplification that is performed at constant temperature.
- A) RNA
 - B) Protein
 - C) DNA
 - D) Lipids
84. Blue white selection is used to.....
- A) Test the presence of a cloned insert in a plasmid
 - B) Test the presence of plasmid in bacteria
 - C) To express the product of cloned gene
 - D) To identify a cloned gene product

92. is a pathogen that spreads through dairy product.
- A) *Pseudomonas pyocyania*
 - B) *Listeria monocytogens*
 - C) *Vibrio parahemolyticus*
 - D) *Clostridium botulinum*
93. Phage typing is a method used for detectingstrains of bacteria
- A) single
 - B) Double
 - C) Pathogenic
 - D) Non pathogenic
94. Superinfection immunity is seen in the case of.....
- A) MRSA
 - B) ElTor vibrios
 - C) Bacteriophage
 - D) E.coli
95. Microbiological, organoleptic, physical/chemical, changes are studied to decide.....
- A) Shelf life
 - B) Nutritional quality
 - C) Spoilage
 - D) Price
96.fungus is successful in controlling insects.
- A) *Aspergillus flavus*
 - B) *Aspergillus niger*
 - C) *Aschersonia aleyrodis*
 - D) *Rhizopus nigricans*
97.reagent used to determine vit.C by UV-spectrophotometry method?
- A) 2, 4-Dinitrophenyl hydrazine
 - B) NaOH
 - C) DNSA
 - D) NaCl.

98. Baculovirus heliothis is produced by method.
- A) surface culture
 - B) submerged culture
 - C) in vivo
 - D) in vitro
99. Vertical transmission of infection means
- A) Transplacental transmission
 - B) Transfer of infection from father to mother
 - C) Person to Person transfer
 - D) Human to animal transfer
100. When an animal virus becomes integrated in to the host's chromosome, it is then called...
- A) Prophage
 - B) Provirus
 - C) Temperate virus
 - D) Coliphage

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-- ROUGH WORK --