Seat	
No.	

P.G. Re. Entrance Examination 2025 M.Sc. Microbiology / Pharmaceutical Microbiology / Industrial Microbiology

Subject Code : 58717

•	y and Date : Thursday, 10-07-202 ne : 01:00 pm to 02.30 pm	5 Total Marks :	100
	tructions:		
1)	All questions are compulsory	Ι.	
2)	Each question carries 1 mar	ζ.	
3)	Answers should be marked in the given OMR answer sheet by darkening the appropriate option.		g the
4)	Follow the instructions giver	n on OMR sheet.	
5)	Rough work shall be done on	the sheet provided at the end of question p	aper.
1.	. Polyphosphates are present inGranules.		
	A) Volutin	C) Basic	
	B) Acid	D) Neutral	
2.	In an autoclave at 15 lbs pres	sure the corresponding temperature attair	ned is
	A) 100°C	B) 110°C	
	C) 115°C	D) 121°C	
3.	Techoic acid present in th covalent bond with	e cell wall of gram positive bacteria mal	kes a
	A) N-acetyl muramic acid		
	B) N-acetyl glucosamine		
	C) Cell membrane lipid		
	D) Both A and C		

4.	can't synthesize essential growth factors.	
	A) Auxotrophs	B) Autotroph
	C) Heterotroph	D) Protrotroph
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 refered 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 r	ecombination is called
	A) Muton	B)Recon
	C) Cistron	D) Operon
	D) Neutral	
20.	is a functional genetic unit the protein.	nat carries information for synthesis of
	A) Muton	B)Recon
	C) Cistron	D) Operon
21.	enzymes are used for curdling	g of milk during cheese production.
	A) Amylase	B) Renin
	C) Lipases	D) Caseinase
22.	2. 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 acti	vity atnm wavelength.
	A) 100	B) 265
	C) 425	D) 525
24.	HAART therapy used for treatment of	fdisease.
	A) AIDS	B) T.pallidum
	C) Clostridium titani	D) Neisseria gonorrhoeae

25. vaccine used for prevention of Meningococcal meningitidis.

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	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 preformed organic compounds are ca	e their own metabolites and depend on Illed
	A) Phototrophs	B) Chemotrophs
	C) Autotrophs	D) Heterotrophs
28.	is the father of antiseptic s	urgery.
	A) Robert Koch	
	B) Paul Ehrlich	
	C) Joseph lister	
	D) Alexander Flemming	
29	act as an organ of adhesion i	n bacteria
	A) Flagella	B) Fimbriae
	C) Capsule	D) Mesosomes
30.	Heat resistant spores of non-toxigenit to test efficacy of sterilizatio	c strains of Clostridium tetani are used n
	A) Moist heat	B) lonizing
	C) Dry heat	D) Non of the above
31.	The concentration of glutaraldehyde percent.	used in high level disinfection is
	A) 0.5	B) 1
	() 1 5	2 (ח

- 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) IgGB) IgEC) IgAD) IgM
- 40. When DNA is denatured by heating and then allowed to renature, there will be.....
 - A) A decrease in absorbence 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

43.	Fluconazole blocks synthesis.	
	A) Cell wall	B) Sterol
	C) Protein	D) Nucleic acid
44.	belongs to first generation q	luinolones.
	A) Ciprofloxacin	
	B) Levofloxacin	
	C) Sparfloxacin	
	D) Nalidixic acid	
45.	One molecule of secretary IgA can bir	nd with molecules of antigen
	A) 2	B) 4
	C) 8	D) 10
46.	antibiotic inhibits cytochron demethylase.	ne-P450 activity by inhibiting enzyme
	A) Nystatin	
	B) Ketoconazole	
	C) Amphotericin-B	
	D) Griseofulvin	
47.	CD4 receptor present oncel	1.
	A) Suppressor	B) Killer
	C) Helper	D) Natural killer
48.	Immunoglobulin in the serum of new	born are mostly
	A) IgM of maternal origin	
	B) IgG of maternal origin	
	C) IgG of endogenous origin	
	D) IgM of endogenous origin	

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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 invo	lves
	A) VNTR loci	B) Chain terminators
	C) Degenerates oligonucleotides	D) RFLP's
52.	Plasma cell has half life of day	′S.
	A) 1-2	B) 2-4
	C) 4-6	D) 6-8
53.	Memory cell has dimeter ofr	nicron.
	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 vac	ccine-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 by5' nucleotidase enzyme.

A) ATP	B) GTP
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C) AMP D) GMP

67. Bacteria are usually present in marine environment.

	A. Barophilic	B. Basophilic	
	C. Neutrophilic	D. Acidophilic	
68.	68. In the transamination, which of the following reaction takes place		
	a) carboxyl group is transferred from	amino acid	
	b) α -amino group is removed from the amino acid		
	c) polymerisation of amino acid takes	s place	
	d) depolymerisation of amino acid ta	kes place	
69.	The concentration of is high	est in marine environment	
	a) K	b) Na	
	c) Mg	d) Ca	
70.	70. One virus species preventing. Multiplication of a second virus is called		
	A) mutation	B) Supervision	
	C) Viral interference	D) Permutation	
71.	1. Inclusion bodies of vaccinia virus are known asbodies.		
	A) Negri	B) Asteroid	
	C) Schuffner dots	D) Guamieri	
72.	Hepatitis B is not transmitted by	route	
	A) Feco-oral route		
	B) Blood transfusion		
	C) Cogenital		
	D) Sexual contact		
73.	. The best laboratory method to diagnose AIDS infection is		
	A) RIA	B) ELISA	
	C) Western bloting	D) CFT	

74. Candida is the etiological agent in all of the following except...... disease.

	A) Endocarditis	B) Meningititis	
	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.		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.	8. 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 viru	ses 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 D) Split genes C) Jumping 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

85.paper is used in Southern blotting technique.

	A) Methyl cellulose	B) Carboxy cellulose	
	C) Amino cellulose	D) Nitrocellulose	
86.	Z DNA is a third type of DNA helix with structure		
	A) CGATGC	B)ATGCCG	
	C) GCTAAT	D) CGCGCG	
87.	7. The von Magnus phenomenon refers to		
	A) Incomplete virus assembly		
	B) Eclipse phase		
	C) Elution		
	D) Abortive infection		
88.	88. A change in DNA that creates UAA codon at a site previously occupied another codon, would result in of the following mutations.		
	A) Amber	B) Opal	
	C) Polar	D) Ochere	
89.	9. Dideoxy DNA sequencing exclusely depends on of the following		
	A) ATP	B) Termination	
	C) Plasmid vector	D) Both A and B	
90.	Production of edible vaccine in using banana or tomato is an example o farming.		
	A) Organic	B) Molecular	
	C) Vegetable farming	D) Compost farming	
91.	1. Usually 100g of a probiotic food contain cfu/g		
	A) 10 ⁶	B) 10 ⁷	
	C) 10 ⁸	D) 10 ⁹	

- 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

-- ROUGH WORK --