QNO: 95 and 10t are cancelled M.Sc. Biochemistr

# 10P/210/1

Question Booklet No.

	( <b>To</b>	be filled	up by the	e candid	late by	blue	/ blac	k bali-p	oint pen	)	
Roll No.					_						
Roli No. (Write	thedigits in	words)					-				
Serial No. of A	nswer She	e <b>t</b>	-/								
Day and Date.		••••••							•	gnature	
			INSTRU	ICTION	s to	CAN	DIDAT	ES			 

(Use only blue/black ball- roint pen in the space above and on both sides of the Answer Sheet)

- 1. Within 10 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that no page/question is missing in case of faulty Question Booklet bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
- 2. Do not bring any loose paper, written or blank, inside the Examination Hall except the Admit Card without its envelope
- 3. A separate Answer Sneet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.
- 4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
- 5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.
- 6. No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet No. on the Question Booklet.
- 7. Any changes in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.
- 8. Each question in this Booklet is followed by four alternative answers. For each question, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet.
- 9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
- 10. Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question leave all the circles in the corresponding row blank (such question will be awarded zero marks).
- 11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
- 12. Deposit both the Question Booklet and the Answer Sheet at the end of the Test.
- 13. You are not permitted to leave the Examination Hall until the end of the Test.
- 14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

( उपर्युक्त निर्देश हिन्दी में अन्तिम आवरण-पुष्ठ पर दिये गए हैं ]

Total No. of Printed Pages : 24

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## No. of Questions/प्रश्नों की संख्या : 150

Time : 2 hours]	[Full Marks : 450
समय : ७ घण्टे ]	[ पूर्णीक : 450

Note: (1) Attempt as many questions as you can. Each question carries 3 (Three) marks. One mark will be deducted for each incorrect answer. Zero mark will be awarded for each unattempted question.

> अधिकाधिक प्रश्नों को हल करने का प्रयत्न करें। प्रत्येक प्रश्न 3 (तीन) अंक का है। प्रत्येक गलत उत्तर के लिए एक अंक काटा जायेगा। प्रत्येक अनुत्तरित प्रश्न का प्राप्तांक शून्य होगा।

(2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

यदि एकाधिक वैकल्पिक उत्तर सही उत्तर के निकट प्रतीत हों, तो निकटतम सही उत्तर दें।

- 1. One of the following shows bioluminescence
  - (1) Copepod
     (2) Dianoflagellates
     (3) Brown Algae
     (4) Red Algae
- 2. One of the following is not a cryoprotectant
- (1) Dimethylsulphoxide(2) Proline(3) Sucrose(4) Glycine

3. The burning of fossil fuels have severely affected

- (1) Sulphur cycle (2) Phosphorus cycle
- (3) Carbon cycle (4) Nitrogen cycle

4. The only non-leguminous plant in which Rhizobia is found as symbiont is

- (1) Casuarina (2) Rice
- (3) Sugarcane (4) Parasponia

5. Ozone holes means

- (1) Holes in ozone layer
- (2) Damaging effects of ozone in troposphere
- (3) Thining of ozone layer
- (4) Absence of ozone layer in some parts of stratosphere

6. In global warming the dangerous gas next to  $CO_2$  is

(1) CH <sub>4</sub>	(2) $SO_2$
(3) NO <sub>2</sub>	(4) Water vapour

### 7. Crossing over is not found in

- (1) Female drosophila (2) Male drosophila
- (3) Maize (4) Evening primrose
- 8. One of the following will not cause a transition mutation

(1) 5-Bromouracil	(2)	Nitrous acid
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(3) 2-Aminopurine (4) None of these

(2)

The mutagenic changes induced by X-rays are mainly by 9. (2) Frame shifting (1) Transitions . (3) Transversions (4) Chromosomal breakage 10. Which of the following sequences is the best target for damage by UV radiation? (2) AGGGAAA (1) AGGCAAA (4) GUAAAAU (3) CTTTTGA 11. Genes for cytoplasmic male sterility in plants are generally located in (2) Cytosol (1) Mitochondrial genome (3) Chloroplast genome (4) Nuclear genome 12. An anticancer agent, taxol, prevents cell division because it (1) Inhibits microtubule plymerisation (2) solubilises microtubule (3) Inhibits DNA replication (4) Inhibits cytokinesis 13. Pseudolinkage is caused by (1) Translocation (2) Deletion (4) Duplication (3) Inversion 14. Crossing over occurs at (2) Zygotene (1) Leptotene (4) Diplotene (3) Pachytene (Turn Over) (3)

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15.	During DNA synthesis, the	frame reading is in the direction of
	(1) $3' \rightarrow 5'$	(2) $5' \rightarrow 3'$
	(3) Both simultaneously	(4) Any one direction at a time
16.	Only one genetic code exist	s for one of the following amino acids
	(1) Tryptophan	(2) Tyrosine
	(3) Isoleucine	(4) Phenyl alanine
17.	One letter code for glutamin	ne is
	(1) P (2) A	(3) Q (4) G
18.	Glutathione is a	· · ·
	(1) Protein	(2) Fatty acid
	(3) Trisaccharide	(4) Tripeptide
19.	The lac operon requires wh	ich one of the following for full express
	(1) Lactose and cAMP	(2) Allolactose and cAMP
	(3) Lactose	(4) Allolactose
20.	Gene expression can be reg	ulated at the level of
	(1) Replication	(2) Transcription
	(3) Conjugation	(4) Cell Division
21.	Recombination dependent	nechanism for DNA repairing is
	(1) SOS repair	(2) Excision repair
	(3) Post-replication repair	(4) Photo reactivation repair

(4)

22.	During replication the primer used for extension of DNA chain is					
	(1) DNA	(2) RNA				
	(3) DNA or RNA	(4) A small polypeptide				
23.	The genomic material in retrovi	ruses is				
	(1) RNA	(2) DNA				
	(3) RNA-DNA duplex	(4) RNA or DNA				
24.	Restriction endonucleases hydr	olyse a polynucleotide from				
	(1) Only the 3' end	· · · · · · · · · · · · · · · · · · ·				
	(2) Only the 5' end					
	(3) From either terminal					
	(4) A phosphodiester bond wit	hin a specific sequence				
25.	Shine-Dalgarno elements on proplementarity to that of	okaryotic open reading frame show com-				
	(1) 16S rRNA of ribosome	(2) 18S rRNA of ribosome				
	(3) 5S rRNA of ribosome	(4) 23S rRNA of ribosome				
26.	In eukaryotes, the distinction in is made by	coding for the start and other Methionine				
	(1) eIF1 (2) eIF2	(3) eIF4 (4) eIF6				
27.	IF2 is a	·				
	(1) ATPase	(2) Ribonuclease				
	(3) GTPase	(4) DNAse				

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(5)

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28. The number of glucose residues per chain of cellulose may be obtained by dividing the molecular weight of cellulose by the molecular weight of

(1) Galactose	(2) Glucose
(3) Sucrose	(4) Fructose

29. The number of stereoisomers of any aldohexose depends on the presence of number of

(1) Symmetric carbon (2) Aldehyde group

(3) Asymmetric carbon (4) Keto group

- **30.** The number of moles may be calculated by dividing the given weight of a compound by the
  - (1) Atomic weight of any atom (2) Molecular weight
  - (3) Number of atoms (4) All of the above

31. The average molecular weight of an amino acid is

(1) 120 (2) 240 (3) 320 (4) 190

32. The average molecular weight of a deoxynucleotide base is

(1) 120 (2) 240 (3) 206 (4) 190

33. In general, the ratio of molecular weights of mRNA and protein is

(1) 2-5 (2) 3-5 (3) 6-8 (4) 8-10

#### 34. The enzymes

- (1) Participate in the reaction (2) Lower the activation energy
- (3) Change at the end of reaction (4) All of the above

35. The protein part of any enzyme is called

- (1) Lipoprotein (2) Holoprotein
- (3) Conjugate protein (4) Apoprotein
- 36. Ribosomes are
  - (1) Glycoproteins (2) Lipoproteins
  - (3) Ribonucleoproteins (4) Complex carbohydrates
- 37. The induced-fit theory proposed by Dr. D.E. Koshland explains about
  - (1) Enzyme-substrate interaction
  - (2) Active site architecture
  - (3) Substrate
  - (4) Lock-and-key analogy
- 38. The non-protein organic molecule which remains tightly bound to the enzyme is called
  - (1) Cofactor (2) Coenzyme
  - (3) Prosthetic group (4) Leaving group
- 39. The best substrate is that which has
  - (1) Lowest  $V_{max}/K_m$  ratio (2)  $V_{max}/K_m$  ratio equal to 1
  - (3) Highest  $V_{max}/K_m$  ratio (4) None of the above
- 40. Atoms that contain the same number of protons but different number of neutrons are called
  - (1) Isobars (2) Isotopes
  - (3) Neobars (4) All of the above

- **41.** The half life of  $P^{32}$  is
  - (1) 14 days
     (2) 1 year

     (3) 14 years
     (4) 6 months

42. The curies per gram (Ci/g) is the unit of

- (1) Specific activity of an enzyme
- (2) Specific activity of a radioactive compound
- (3) Radioactivity
- (4) None of the above
- **43.** 1 mM is equal to

(1) $1 \mu mole/ml$	(2) 1 nmole/ml
(3) 1 pmole/ml	(4) 1 fmole/ml

44. The enthalpy, entropy and free energy depend

- (1) On the mechanism and path of the system
- (2) Only on the initial state of the system
- (3) Only on the final state of the system
- (4) Only on the initial and final states of the system

45. In which of the following compounds C-H bond length is minimum?

- (1) Ethane (2) Ethene
- (3) 1,2-dichloroethene

(4) 1,2-dichloroethane

- 46. The Huckel rule defines
  - (1) Alkanes nature
- (2) Alkenes nature

(3) Aromaticity

- (4) Transition elements
- (8)

47. In any organic species, if the number of pi bond is one, the type of hybridization would be (1) sp2 (2) sp (4) both sp3 and sp2 (3) sp3 48. Any atom or group of atoms that contain single electron is called as (1) Compound (2) Ions (3) Free radical (4) All of the above 49. One of the following reaction intermediates does not have a planar structure (1) Alkyl carbocation (2) Alkyl carbanion (3) Alkyl free radical (4) Singlet carbene 50. Enantiomers are stereoisomers which exhibit (1) Mirror images of each other (2) Not mirror images of each other (3) Same structure (4) No any optical properties 51. Corey-House synthesis is a method for preparing (1) Pure alkanes from alkynes (2) Pure aromatic compounds (3) Pure alkenes from alkanes (4) Pure alkanes from alkyl halides 52. Vinyl halides are (1) Haloalkanes (2) Halobenzenes (3) Haloethenes (4) Carotenes 53. Freons are (1) Carbohydrates (2) Aromatic molecules (3) Unsaturated fats (4) Chioroflurocarbons

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54.	One of the following is true				
·	<ol> <li>(1) The cation is always bigger in size than the parent atom</li> <li>(2) An anion is always bigger in size than the parent atom</li> <li>(3) The anion is always smaller in size than the parent atom</li> <li>(4) The cation is always same in size with that of the parent atom</li> </ol>				
55.	Cesium (Cs) belongs to				
	(1) s1-block (2) s2-block	(3) p2-block (4) p5-block			
56.	Allred and Rochow defined one	e of the following			
	<ol> <li>(1) Electropositivity</li> <li>(3) Atomic size</li> </ol>	<ul><li>(2) Electronegativity</li><li>(4) Magnetic property</li></ul>			
57.	Cryophytic algae grow on				
	<ul><li>(1) Rocks</li><li>(3) Ice and snow</li></ul>	<ul><li>(2) Water</li><li>(4) Soil</li></ul>			
58.	Agar-agar is obtained from				
	<ol> <li>(1) Chlorella</li> <li>(3) Sargassum</li> </ol>	<ul><li>(2) Gracilaria</li><li>(4) Smut</li></ul>			
59.	The smallest known aerobic p as	rokaryotes without a cell wall are called			
	<ol> <li>Mycoplasmas</li> <li>Viroids</li> </ol>	<ul><li>(2) Virus</li><li>(4) Nostoc</li></ul>			
<b>60.</b> .	Litmus is a natural dye obtained	1 from			
	(1) Algae (2) Lichens	(3) Fungi (4) Corals			

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61. Double stranded RNA viruses are called (1) Pox viruses (2) Lentiviruses (3) Reoviruses (4) Riboviruses 62. HIV-1 is a (1) Pox virus (2) Reovirus (3) Lentivirus (4) Retrovirus 63. Claviceps synthesize the following metabolite (1) Ergot (2) Penicillin (3) Agarose (4) Kanamycin 64. The genetic material in bacteria is anchored on to the (1) Plastids (2) Scaffold protein (3) Histones (4) Membrane 65. The N-acetylmuramic acid and N-acetylgluconic acids are constituents of (2) Cell wall of virus (1) Cell wall of algae (3) Animal cell membrane (4) Bacterial cell wall 66. One of the following is not a parasite (1) Gnetum trinerve (2) Loa loa (4) Plasmodium vivax (3) Pisum sativum 67. Gingko biloba is also known as (1) Living fossil (2) Fossil fuel (3) Cactus (4) Succulent plant

6 <b>8.</b>	Vegetable farming is known as				
	(1) Sericulture	(2)	Apiculture		
	(3) Tissue culture	(4)	Olericulture		
69.	Deficiency of vitamin E leads to cause				
	(1) Cataract (2) Ricket		(3) Infertility	(4) Scurvy	
70.	The highly low pH of gastric ju	ice is	5		
	(1) Bacteriostatic in nature	(2)	Fungicidal in natu	ıre	
	(3) Viricidal in nature	(4)	Namaticidal in na	ture	
71.	The vitamin needed for blood c	lotti	ng is		
	(1) C (2) B <sub>12</sub>		(3) D	(4) K	
72.	Wheat is a	·			
	(1) C3 plant	(2)	C4 plant		
	(3) Succulent plant	(4)	All of the above		
73.	'Chloride shift' in blood is requ	ired	for the transport of	f	
	(1) O <sub>2</sub> (2) Ammonia		(3) Urea	(4) CO <sub>2</sub>	
74.	RuDP carboxylase can utilize fo	llow	ing as the substrate	e	
	(1) Water	(2)	$O_2$ and $CO_2$		
	(3) O <sub>2</sub>		CO <sub>2</sub>		

(12)

75.	Auxins generally inhibit cell enlargement in root tissue whereas gibberellins				
	<ul><li>(1) Show no such effect</li><li>(3) Do not act on root tissues</li></ul>				
76.	The metal atom found in the n	nyoglobin is			
	(1) Ca (2) Fe	(3) Cu (4) Mg			
77.	The ribose sugar in DNA is att	ached to purine bases at the position			
	(1) N-9 (2) N-5	(3) N-3 (4) N-4			
78.	The majority of amino acids in	n histones in eukaryotes are			
	• -	(2) Basic in nature			
	(3) Acidic in nature	(4) Hydrophobic in nature			
79.	The prosthetic group present	in a conjugated protein like ribosome is			
	(1) FAD (2) DNA	(3) Galactose (4) RNA			
80.	The fatty acids esters with gly	cerol are known as			
	(1) Lipids	(2) Polysaccharides			
	(3) Nucleic acids	(4) Vitamins			
81.	Most of the water soluble vita	mins are used as			
	(1) Substrate	(2) Activator			
	(3) Coenzymes	(4) Non-competitive inhibitor			

The genetic material of Simion Virus 40 (SV 40) is 82. (2) DNA (1) RNA (3) RNA-DNA hybrid (4) Peptidonucleic acid 83. Microsomes are formed from (2) Lysosomes (1) Chloroplasts (3) Endoplasmic reticulum (4) Golgi body 84. The red pigment found in the ripe tomatoes are called (4) Lycopene (1) Carotene (2) Chloroplast (3) Leukoplast Zymogens are also called as (1) Nucleoproteins (2) Proenzymes (3) Coenzymes (4) Cofactors 86. The generation time for E.coli is (2) 30 minutes (1) 20 minutes (4) 24 hours (3) 1 hour 87. The vectors for the virus causing yellow fever are (1) Mosquitoes (2) Ticks (3) Black flies (4) Tsetse flies 88. The most variable period of the cell cycle is (3) G1 phase (4) M phase (1) S phase (2) G2 phase

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89.	The codon UGA is also called as					
	(1) Ochre	(2) Opal		(3)	Amber	(4) Initiation
90.	Transcription ta	kes place in				
	<ol> <li>(1) Nucleus</li> <li>(3) Golgi body</li> </ol>				oplasm loplasmic retio	culum
91.	Schilling test is					
	<ol> <li>(1) Absorption</li> <li>(2) Rate of resp</li> <li>(3) Rate of urin</li> <li>(4) Pulse rate</li> </ol>	piration	m the	gut		
92.	The force with sis called	which the surf	ace m	olec	ules of a liqui	d are held together
	<ol> <li>(1) Tensile stre</li> <li>(3) Cohesive</li> </ol>	ngth	• •	Pov Sur	ver face tension	
93.	In liver, the glyc to	ogen breaks do	own to	o glu	cose but in mu	scle it breaks down
	(1) Glucose	(2) Fructose	•	(3)	Mannose	(4) Lactic acid
94.	One of the follo	wing is not a r	educi	ng su	ıgar	
	<ul><li>(1) Fructose</li><li>(3) Maltose</li></ul>				actose ctose	
95.	One of the follo	wing is not an	essen	itial f	atty acid	
	(1) Linoleic aci (3) Arachidoni		• •		mitic acid oleic acid	

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96. One of the following is a suicide enzyme

- (1) GOT (2) Cyclooxygenase
- (3) LDH (4) Glucokinase
- 97. The colour of bile is yellow
  - (1) Due to salts present in bile
  - (2) Due to biliverdin present in bile
  - (3) Due to bilirubin present in bile
  - (4) Due to bile enzyme reticulum
- 98. The red wine is considered beneficial because
  - (1) It contains antioxidants
  - (2) It contains proper carbohydrate
  - (3) It contains vitamins
  - (4) It contains proteins
- **99.** Enzymes whose concentration in a cell is dependent of any inducer is called as
  - (1) Ribozyme (2) Constitutive enzyme
  - (3) Inducive enzyme (4) Abzyme
- 100. One of the following is true
  - (1) Apoenzyme coenzyme = holoenzyme
  - (2) Apoenzyme = holoenzyme
  - (3) Apoenzyme + coenzyme = holoenzyme
  - (4) Coenzyme = holoenzyme

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101. The disease dev	veloped due to	defici	ency of V	it B3 is
(1) Beri-Beri		(2)	Pellagra	
(3) Recketsia	(3) Recketsia			ndness
102. DNA gyrase is	also called as			
(1) Topoisome	erse I	(2)	Helicase	
(3) Topoisome	opoisomerase II (4) Replicase			
103. The offsprings	obtain how mu	ich gei	nes from f	ather
(1) 50%	(2) 75%		(3) 25%	(4) 100%
104. A child with IQ	140 belongs t	o whic	ch categor	y
(1) Average		(2)	Superior	
(3) Most super	rior	(4)	Genius	
105. Mutations are s	so often		•	
(1) Dominant		(2)	Always s	ilent
(3) Always do	minant	(4)	Silent	
106. AIDS virus con	itains			
(1) Two stran	ds of RNA	(2)	Double s	tranded RNA
(3) Double str	anded DNA	(4)	Single str	and of DNA
107. Interferrons ar	e			
(1) Anticance	r protein	(2)	Antifung	al proteins
(3) Antiviral p	-	(A)	Antibact	erial proteins

(17)

108.	3. Filariasis is caused by					
	(1) Protozoa (2) Helminths	5	(3) Virus	(4)	Bacteria	
109.	In ascariasis disease, one of th	e fol	llowing is used			
	(1) Mustard oil		Camphor			
	(3) Chloroquine	(4)	Chenopodium oil			
110.	Honey primarily contains					
	(1) Calcium	(2)	Lipids			
	(3) Glucose and fructose	(4)	Proteins			
111.	One of the following is not an	enzy	/me			
	(1) Renin (2) Trypsin		(3) Amylose	(4)	Lipase	
112.	If your gums are bleeding, you	ı are	deficient in			
	(1) Vit C	(2)	Trace metals			
	(3) Protein	(4)	Carbohydrates			
113.	Haptens are					
	(1) Inclusion bodies	(2)	Large molecules			
	(3) Medium size molecules	(4)	Small molecules			
114.	Deamination of cytosine leads	to p	production of			
	(1) Guanosine	(2)	Uracil			
	(3) Thymidine	(4)	Adenosine			

115.	The number of release factors involved in prokaryotic translation are						
	(1) 1 (2) 2	(3) 3 (4) 4					
116.	Peptidyl transferase are assoc	ciated to					
	(1) Smaller subunit of ribosc	mes					
	(2) Larger subunit of ribosor	nes					
	(3) Golgibody						
	(4) Endoplasmic reticulum						
117.	Chaperonins are						
	(1) Heat-shock proteins	(2) Involved in protein folding					
	(3) Both of the above	(4) None of the above					
118.	More than one codon can spe	cify the same amino acid. This is called					
118.	More than one codon can spe (1) Continuity	ccify the same amino acid. This is called (2) Regeneracy					
118.		• • •					
	(1) Continuity	<ul><li>(2) Regeneracy</li><li>(4) Degeneracy</li></ul>					
	<ol> <li>(1) Continuity</li> <li>(3) Universality</li> </ol>	<ul><li>(2) Regeneracy</li><li>(4) Degeneracy</li><li>ed into</li></ul>					
	<ol> <li>(1) Continuity</li> <li>(3) Universality</li> <li>RNA polymerase II is localized</li> </ol>	<ul><li>(2) Regeneracy</li><li>(4) Degeneracy</li><li>ed into</li></ul>					
119.	<ol> <li>(1) Continuity</li> <li>(3) Universality</li> <li>RNA polymerase II is localized</li> <li>(1) Endoplasmic reticulum</li> </ol>	<ul> <li>(2) Regeneracy</li> <li>(4) Degeneracy</li> <li>ed into</li> <li>(2) Nucleolus</li> <li>(4) Nucleus</li> </ul>					
119.	<ol> <li>(1) Continuity</li> <li>(3) Universality</li> <li>RNA polymerase II is localized</li> <li>(1) Endoplasmic reticulum</li> <li>(3) Cytoplasm</li> </ol>	<ul> <li>(2) Regeneracy</li> <li>(4) Degeneracy</li> <li>ed into</li> <li>(2) Nucleolus</li> <li>(4) Nucleus</li> </ul>					
119.	<ol> <li>(1) Continuity</li> <li>(3) Universality</li> <li>RNA polymerase II is localized</li> <li>(1) Endoplasmic reticulum</li> <li>(3) Cytoplasm</li> <li>DNA pol α functions is involutional</li> </ol>	<ul> <li>(2) Regeneracy</li> <li>(4) Degeneracy</li> <li>ed into</li> <li>(2) Nucleolus</li> <li>(4) Nucleus</li> <li>ved into replication of</li> </ul>					

121.	Tricuspid valve exists between	L		
•	(1) Both ventricles	(2)	Both auricles	
	(3) Right auricle and ventricle	(4)	Left auricle and	ventricle
122.	Oral rehydration therapy is as	socia	ated with	
	(1) Cholera	(2)	Salmonella	
	(3) Meningitis	(4)	Leprosy	
123.	The percentage of protein into	HD	L is	
	(1) 10% (2) 50%		(3) 20%	(4) 35%
124.	Lysosomes contain			
	(1) Lytic enzymes	(2)	Carbohydrates	· . ·
	(3) Lipids	(4)	Nucleic acids	
125.	Mendel did his experiments o	n pe	a whereas Kolre	uter did on
	(1) Pea (2) Tobacco	·	(3) Eggplant	(4) Chick pea
126.	The presence of CO <sub>2</sub> in bio g	as		
	(1) Increases its calorific value	le		
•	(2) Makes it liquid			
	(3) Does not influence its cal	lorifi	c value	
	(4) Decreases its calorific va	lue		

(Continued)

127.	On spot treatment of environment pollutant is known as				
	(1) Local	(2) Ex situ			
·	(3) In situ	(4) Transported			
128.	Hybridoma cells are				
	(1) Fused lymphocytes	and malignant cells			
	(2) Fused lymphocytes	and myeloma cells			
	(3) Fused lymphocytes	and malignant myeloma cells			
	(4) Fused erythrocytes	and malignant myeloma cells			
129.	Endorphin is a				
	(1) Protein	(2) Lipid			
	(3) Carbohydrate	(4) Nucleic acid			
130.	The loss or addition of o	one or more chromosomes is known a			
	(1) Polyploidy	(2) Aploidy			
	(3) Euploidy	(4) Aneuploidy			
131.	Alkeptonuria is a	· · · ·			
	(1) Syndrom	(2) Inborn error of metabolism			
	(3) Disease	(4) Symptom of a disease			
132.	The science of improvi	ng human stock is known as			
	(1) Genetics	(2) Eugenics			
	(3) Biology	(4) Animal science			

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- 133. A DNA has  $2.1 \times 10^5$  nucleotides in its coding strand. The number of codons are
  - (1)  $7 \times 10^4$  (2)  $6 \times 10^3$  (3)  $7 \times 10^3$  (4)  $4 \times 10^3$
- 134. Collagen is rich in
  - (1) Histidine (2) Hydroxyproline
  - (3) Tryptophan (4) Alanine
- 135. Measles is caused by
  - Bacteria
     Puccinia virus
     Rubeola virus
     Fungi

136. Any gene that is placed into a plasmid is called

- (1) Small plasmid
   (2) Insert
   (3) DNA
   (4) Trans gene
- 137. A single stranded DNA or RNA molecule used to detect the presence of a complementary nucleic acid is called

(1) Insert	(2) Sensor	(3) Probe	(4) Detector

- 138. Competent cells are used for
  - (1) Cloning (2) Capsduction
  - (3) Transformation (4) Transduction
    - (22)

139.	Oxidative stress is caused due to				
	<ol> <li>Production of excessive free radicals</li> <li>Indigestion</li> <li>Production of excessive HCl in stomach</li> </ol>				
	(4) Low BMR				
140.	The antibodies that are abl called as	e to catalyze specific chemical reactions are			
	(1) Abzymes	(2) Ribozymes			
	(3) Enzymes	(4) Isozymes			
141.	Confinement of the enzyme	e molecules to a distinct phase is known as			
	(1) Absorption	(2) Purification			
·	(3) Adsorption	(4) Immobilisation			
142.	Some synthetic polymers p	ossessing enzyme activities are called as			
	(1) Coenzymes	(2) Suicidal enzymes			
	(3) Synzymes	(4) Extremozymes			
143.	Which of the following ant	ibiotic inhibits the translation in eukaryotes			
	(1) Tetracyclin	(2) Penicillin			
	(3) Puromycin	(4) Chloromycetin			
144.	Chewing gum is the latex,	obtained from the bark of			
	(1) Ficus hispida	(2) Cincona			
	(3) Achras sapota	(4) Plumeria rubra			

145.	The order of reaction for radioactive decay is						
	(1) Zero	(2) Second	(3) Third	(4) First			
146.	The sugar pres	ent in DNA belo	ong to a configuration				
	(1) L	(2) 1	(3) D	(4) d			
147.	Starch after bo	iling with diluted	d HCl gives				
	(1) Glucose	(2) Mannose	(3) Fructose	(4) Lactose			
148.	The transition	element present	in vitamin $B_{12}$ is				
	(1) Pb	(2) Ni	(3) Cr	(4) Co			
149.	A potential ant	ioxidant present	t in turmeric is				
	(1) Curcumin	(2) Lycpene	(3) Catechine	(4) Rasvertrol			
150.	Dicer acts like	a					
	<ol> <li>(1) Nucleic ac</li> <li>(3) Complex c</li> </ol>	id carbohydrate	<ul><li>(2) Enzyme</li><li>(4) Antibiotic</li></ul>				

## अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण-पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल *नीली-काली बाल-प्वाइंट पेन* से ही लिखें)

- प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त याये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
- 2. परीक्षा भवन में लिफाफा रहित प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
- उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
- 4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
- 5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
- 6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक सं० और ओ० एम० आर० पत्र संख्या की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
- 7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष-निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
- 8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिये आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देगों के अनुसार पेन से गाढ़ा करना है।
- 9. प्रत्येक प्रश्न के उत्तर के लिये केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
- 10. ध्यान दे कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता हैं। 'यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं, तो सम्बन्धित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
- 11 रफ कार्य के लिये इस-पुस्तिका के मुखपृष्ठ के अंदर वाला पृष्ठ तथा अंतिम खाली पृष्ठ का प्रयोग करें।
- 12. परीक्षा के उपरान्त प्रश्न-पुस्तिका एवं उत्तर-पत्र परीक्षा भवन में जमा कर दें।
- 13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।
- 14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की भागी होगा / होगी।