अभ्यर्थियों के लिए निर्देश

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

- 1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न खूटा नहीं है। पुस्तिका दोषयुक्त पाये 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 अतिरिक*, लिखा या सादा कोई भी खुला करगज साथ में न लायें।
- 3. 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 मृल्यांकन 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 वृत्तीं की गाढ़ा कर दें। जहाँ-पहाँ आदश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
- 6. ओ॰ एम॰ आर॰ पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक सं॰ और ओ॰ एम॰ आर॰ पत्र सं॰ की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
- उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निर्शेक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
- 8. प्रश्त-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 निर्देशों के अनुसार पेन से गाड़ा करना है।
- 9. प्रत्येक प्रश्न के उत्तर के लिये केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक युत्तों को गाढ़ा करने पर अधवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
- 10. ध्यान दें कि एक बार स्थाही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं तो सम्बन्धित पैक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
- 11. रफ़ कार्य के लिये प्रश्न-पुरितका के मुखपृष्ठ के अन्दर वाले पृष्ठ तथा अंतिम पृष्ठ का प्रयोग करें।
- 12. परीक्षा के उपरान्त केवल *ओ०एम०आर० 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 अध्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भाग होगा/होगी।





147.	Ozone ca	an be easily	y detected	i by				
	(1) Hg		(2) AgC	1 (3	3)	H ₂ O ₂	(4)	silver
148.	Mitochor	ndria proba	bly evolve	ed from				
	(1) endo	symbiotic 1	pacteria	(2	2)	archaebacteria		
	(3) para	symbiotic b	acteria.	(4	4)	eubacteria		
149.	The expr	ession of n	nost gene	s is regulated	l pr	rimarily at the le	evel	of
	(1) repli	cation		(2	2)	translation		
	(3) trans	scription		14	*)	post-translations	al m	odification
150.	Alcoholic	fermentati	on differe	from anaero	bic	respiration in b	eing	1
	(1) inter	cellular	(2) intre	cellular (3	3)	internuclear	(4)	extracellular
					0			



D/4(174)-1700



140.	Hybridomas are ass	ociated to production	m of			
	(1) monoclonal anti	ibodies	(2)	somatic hybrids		
	(3) cancer cells	•6	(4)	synthetic antibo	dies	
141.	One Dalton is equa	l to				
	(1) 1 Picogram		(2)	1 Microgram		
	(3) 1 Nanogram		(4)	3-32×10 ⁻²⁴ gm		
142.	Which one of the fo	allowing is a compo	nent	of ribosomes?		
	(1) rRNA	(2) mRNA	(3)	tRNA	(4)	anRNA
143.	Particulate theory of	f inheritance was p	ropo	sed by		
	(1) de Vries	(2) Darwin	(3)	Weismann	(4)	G. J. Mendel
144.	in Pinacol-Pinacolor	ne rearrangement, th	ic rea	ctive species und	ergo	ing rearrangement is
	(1) carbocation	(2) carbene	(3)	carbanion	(4)	free radical
145.	The center of Pribn	ow box in E. coli lic	cs us	ually -10 and o	ontai	in
	(1) TCGGTAG	(2) GACGATT	(3)	TATGTTG	(4)	AGACTTA
146.	The actual reducing	g agent of haematit	e in 1	blast furnace is		
	(1) CO ₂		(2)	CO		
	(3) nitrogen peroxi	de	(4)	nitric oxide		
(174)		2:	3			(P.T.O.)



135.	The scaffold protein around which the	bact	erial DNA is attached, contains
	(1) more of basic amino acids		
	(2) more of acidic amino acids		
	(3) more of aromatic amino acids		
	(4) more of hydrophobic amino acids		
136.	The RNA primer synthesised during rep	olica	tion is removed by
		00.000	10-75 - 64 - 64 - 64 - 64 - 64 - 64 - 64 - 6
	(1) DNA polymerase-II	(2)	STA CATALOGUES SECTION SOME PER
	(3) DNA polymerase -I	(4)	RNA polymerase-II
137.	The Okazaki fragments contain approxi	meti	elv
	(1) 1000 nucleotides		
		N. 80 - 42	100 nucleotides
	(3) 10000 nucleotides	(4)	50000 nucleotides .
138.	The technique of introduction of extern	al go	ene(a) for improving genotype is
	(1) tissue engineering	(2)	dairy technology
	(3) genetic engineering	(4)	enzyme technology
139.	The synthetic vaccines belong to		
	(1) fourth generation	(2)	third generation
	(3) second generation	(4)	first generation
[174]	22		



1 29	The substrate for photorespiration	in .	
	850), 150	id (3) maleic acid (4) oxalic acid	
130.	HIV-1 reverse transcriptase contain	8	
	(1) RNA polymerase activity	(2) DNA ligase activity	
	(3) DNA polymerase activity	(4) endonuclease activity	
131.	PCR is used for		
	(1) DNA-recombination	(2) DNA amplification	
	(3) DNA-repair	(4) DNA identification	
132.	Which one of the following is not a	a cloning vector?	
	(1) pBR322 (2) Ti plasmid	(3) Hind-III (4) pUC-8	
133.	DNA blotting method is known as		
	(1) Southern blotting	(2) Northern blotting	
	(3) Western blotting	(4) RT-PCR	
134.	RF-value is related to		
	(1) GFC (2) IEC	(3) TLC (4) GLC	
(174)		21 (P.T.	.O.j



122.	Which one of the	following cell organell	les is	s involved in sig	nall	ing processes?
	(1) Cell wall		(2)	Golgi body		
	(3) Spherosomes		(4)	Plasma membr	ane	
123.	Which one of the f	ollowing is known as	the	pacemaker of t	he l	neart?
	(1) AV node		(2)	Bundle of his		
	(3) SA node		(4)	Purkinje systen	a	
124.	Spectrin is a protei	in attached to				
	(1) bacterial cell		(2)	mitochondrial n	nem	brane
	(3) erythrocytes co	valently	(4)	erythrocytes no	n-co	valently
125.	Vitamin D is derive	d from				
	(1) proteins	(2) carbohydrates	(3)	cholestero]	(4)	HMG-CoA
126.	Which one of the fo	ollowing ions bind su	rong)	ly to valinomych	a?	
	(1) K ⁺	(2) Na ⁺	(3)	Ca*+	(4)	Fe**
127.	Malate-aspartate sh	uttle is operated in				
	(I) liver	(2) skin	(3)	heart	(4)	Both (1) and (3)
128.	Electron-transport	hain is inhibited by				
	(1) Ca ²⁺	(2) vitamin A	(3)	antimycin-A	(4)	O ₂
174)		20				



	The deamination of	adamina waaulta in t	the G	ormation of			
116.	The deamination of						
	(1) cytosine	(2) hypoxanthine	(3)	adenine	(4)	uracil	
117.	Thymine dimera are	formed by					
	(1) X-rays	(2) Alpha-rays	(3)	Gamma-rays	(4)	UV-radiation	1
118.	Which of the follow	ing discases is an e	eram)	ple of deletion?			
	(1) Down's syndrou	ne	(2)	Cri-du-chat syr	idro	me	
	(3) Turner's syndro	ome	(4)	Marasmus disc	aec		
119.	The seedless banar	as are mostly					
	(1) haploid	(2) tetraploid	(3)	diploid	(4)	triploid '	
120.	Who coined the ter	m chromosome?					
	(1) Hofmeister	(2) Schimmer	(3)	Waldeyer	(4)	Strasburger	
121.	The histone protein	ns constituting a nu	cleos	ome contain			
	(1) more of aroma	tic amino acide					
	(2) more of basic	amino acida					
	(3) more of acidic	amino acida		36			
	(4) more of hydro	phobic amino acids					
(174)		1	9				(P.T.O.)



109.	Lecithin contains a nitrogenous base, c	alled as	
	(1) choline (2) inositol	(3) lysine	(4) histidine
110.	The synthesis of prostaglandins is inhib	pited by	
	(1) fluoride ion (2) cyanide ion	(3) arsenate ion	(4) espirin
111.	Fatty acid synthesis takes place in		
	(1) cytosol (2) mitochondria	(3) microsomes	(4) chloroplast
112.	Ketone bodies are utilized in		
	(1) mitochondria	(2) chloroplast	
	(3) extra-hepatic tissues	(4) Golgi bodies	
113.	Which one of the following hormones	egulate the volum	e of urine?
	(1) Antidiuretic hormone	(2) Thyroxine	
	(3) Insulin	(4) Adrenalin	
114.	The organisms that can grow on mini-	nal medium are co	alled
	(1) heterotrophs	(2) autotrophs	
	(3) auxotrophs	(4) prototrophs	
115.	Most lethal mutations in diploid organ	ilams are	
	(1) recessive	(2) beneficial	
	(3) dominant	(4) incomplete	dominance



101.	The total number of	f amino acids found i	in H and L chains of an immunoglobulin are
	(1) 214 and 446	(2) 275 and 350	(3) 250 and 500 (4) 100 and 300
102.	CD4, commonly fo	und on the surface	of T-helper cells is a
	(1) phospholipid	(2) glycoprotein	(3) glycolipid (4) nucleoprotein
103.	Which of the follow	ving is a heterospore	ous pteridophyte?
	(1) Isoetea	(2) Nephrolepis	(3) Lycopodium (4) Equisetum
104.	Synthesis of RNA i	s terminated by a	
	(1) Delta-factor	(2) Sigma-factor	(3) Alpha-factor (4) Rho-factor
105.	Possible number of	isomers of glucose	is
	(1) 8	(2) 16	(3) 32 (4) 64
106.	The carrier of the	TCA cycle is	
	(1) oxaloacetate	(2) succinate	(3) fumarate (4) malate
107.	Morphine is obtain	ed from	
	(1) Rauvolfia serpe	ntina	(2) Adhatoda vasica
	(3) Withania somni	fera	(4) Papaver somniferum
108.	Which one of the fe	ollowing is involved :	in DNA fingerprinting?
	(1) cDNA		(2) Minisatellites
	(3) rRNA		(4) Bacterial DNA
(174)		17	(P.T.O.



04	Glutathione is a	
34.	10000 D 16 100	
	(1) carbohydrate (2) lipid	(3) tripeptide (4) vitamin
95.	'Lecithinase', known for causing lysis of a is produced by	crythrocytes and other tissues containing lipid,
	(1) Aspergillus glaucus	(2) Clostridium perfringenes
	(3) Streptococcus aureus	(4) Streptococcus pyogenus
96.	Which one of the following when pre- carboxylase?	sent in excess can inhibit activity of RuDF
	(1) Water (2) O ₂ and CO ₂	(3) CO ₂ (4) O ₂
97.	In brain, the major mechanism for rem	noval of ammonia is
	(1) asparagine (2) aspartate	(3) glutamine (4) glutamate
98.	The inactive form of an enzyme is	
	(1) neoenzyme (2) isoenzymes	(3) zymogens (4) mesozymes
99.	The beta-pleated sheet is present in	
	(1) fibroin	(2) globular proteins
	(3) liposomes	(4) primary proteins
100.	The immunoglobuline are made up of	
	(1) phospholipids	(2) glycoproteins
	(3) nucleoproteins	(4) hologamy
(1 74)	16	



88.	Amylopectin is						
	(1) water insoluble	(1) water insoluble					
	(2) partly soluble in water						
	(3) water soluble	(3) water soluble					
	(4) only soluble in organic solvents						
89.	Lindane is an example of (1) insecticide (2) herbicide	(3) pesticide (4) rodenticide					
	(2)						
90.	Ras proteins contain subfamilies. The c	ne of which is not a part of it					
	(1) Rho protein (2) Rac protein	(3) SH2 protein (4) Rab protein					
91.	Which one of the following bacterial oxi	dizes ferrous into ferric form?					
	(1) Leptothrix ochracae	(2) Bacillus thermophyllaus					
	(3) Pasteurella pestis	(4) Treponema pallidum					
92.	Folic acid deficiency may impair						
	(1) biosynthesis of arginine	(2) biosynthesis of fatty acids					
	(3) hemoglobin synthesis	(4) None of the above					
93.	A toxoid is a						
	(1) heavy toxin	(2) toxin that losses its activity					
	(3) potent toxin	(4) harmful toxin					
[174]	- 15	S	(P.T.O.)				



(174)

81.	The entropy change	for the melting of i	ice i	3		
	(1) +ve	(2) -ve	(3)	zero	(4)	No change
82.	Natural rubber is a	polymer derived fro	m			
	(1) propylene	(2) ethylene	(3)	isoprene	(4)	butadiene
83.	Dry ice is					
	(1) solid CO ₂		(2)	solid SO ₂		
	(3) solid benzene		(4)	solid ice withou	it wa	ater
84.	Genes that get expr	essed only when rec	quire	d, are called as		78
	(1) constitutive	[2] induced	(3)	silent .	(4)	None of the abo
5 5.	The rate limiting at	ep in the synthesis	of fa	tty acids is catal	lysec	i by
	(1) HMG-CoA synth	188C	(2)	fatty acid synth	asc	
	(3) thiolase		(4)	acetyl-CoA carb	oxyl	ase
86.	After extraction of o	ell lysate with phen	ol, t	he nucleic acid t	will !	be in
	(1) interphase		(2)	the pellet		
	(3) aqueous phase		(4)	phenol phase		
87.	One molecule of her	moglobin contains ir	on e	itoma		
	(1) 1	(2) 4	(3)	2	(4)	3
		5W -				100



75.	The subunits of ribosomes are man	usactured in the					
	(1) nucleolus	(2) endoplasmic reticulum					
	(3) Golgi apparatus	(4) mitochondria					
' 6.	The chemical reaction that converts a	ducose to pyruvic acid in a living cell occurs under					
	(1) aerobic conditions						
	(2) anaerobic conditions						
	(3) Both aerobic and anaerobic conditions						
	(4) fermentation conditions						
7.	Which of the following enzymes diges:	t peptidogiyean layer in the bacterial cell wall?					
	(1) Renin (2) Lysozyme	(3) Pepsin (4) Trypsin					
8,	NMR frequency lies in						
	(1) IR region	(2) UV region					
	(3) Radiofrequency region	(4) X-ray region					
9.	Mond's process is used for the extra	action of					
	(1) copper (2) zinc	(3) nickel (4) silver					
0.	An alkyl halide reacts with metallic	sodium in dry ether. The reaction is called as					
	()) Sandmeyer reaction	(2) Wittig reaction					
	(3) Parasitism	(4) Wurtz reaction					
4)		13 (P.T.O.)					



The cross of F1 with its homozygous re	cces	sive parent is called as
(1) test cross (2) back cross	(3)	top cross (4) direct cross
The restriction endonucleases recognize	onl	y
(1) consensus sequences	(2)	palindromic sequences
(3) repeat sequences	(4)	random sequences
The base in the wobble position of a co	odon	
(1) is the 3' (third) base	(2)	is the 5' (first) base
(3) is the second base	(4)	often contains inosine
Alpha amanitin inhibits the action of		
(1) eucaryotic RNA polymerase III	(2)	eucaryotic RNA polymerase I
(3) eucaryotic RNA polymerase II	(4)	DNA polymerase I
Kjeldahl method is used for estimation	of	3 5
(1) nitrogen (2) carbon	(3)	alcohol (4) halides
Biuret method is used for estimation of	- 8	
(1) DNA (2) protein	(3)	RNA (4) lipids
If one strand of DNA has the sequence strand will have the sequences	5'	ATCGAACC3', the other complimenta
(1) 5'GCTTAGCT3'	(2)	5'TCGATTCG.,3'
(3) 5'TTCCGGAA3'	(4)	5'GGTTCGAT3'
12		·
	(1) test cross (2) back cross The restriction endonucleases recognize (1) consensus sequences (3) repeat sequences The base in the wobble position of a consensus in the wobble position of a consensus in the second base (3) is the second base Alpha amanitin inhibits the action of (1) eucaryotic RNA polymerase III (3) eucaryotic RNA polymerase III (4) eucaryotic RNA polymerase III (5) eucaryotic RNA polymerase III (6) eucaryotic RNA polymerase III (7) eucaryotic RNA polymerase III (8) eucaryotic RNA polymerase III (9) eucaryotic RNA polymerase III (1) mitrogen (2) carbon Eliuret method is used for estimation of (1) DNA (2) protein If one strand of DNA has the sequence strand will have the sequences (1) 5'GCTTAGCT3' (3) 5'TTCCGGAA3'	The restriction endonucleases recognize onlesses (1) consensus sequences (2) (3) repeat sequences (4) The base in the wobble position of a codom (1) is the 3' (third) base (2) (3) is the second base (4) Alpha amanitin inhibits the action of (1) eucaryotic RNA polymerase III (2) (3) eucaryotic RNA polymerase III (4) Kjeldahl method is used for estimation of (1) nitrogen (2) carbon (3) Biuret method is used for estimation of (1) DNA (2) protein (3) If one strand of DNA has the sequence 5' strand will have the sequences (1) 5'GCTTAGCT3' (2) (3) 5'TTCCGGAA3' (4)



O.	Pro	teina absorb mai	xima	illy at what wave	eleng	gth?		
	(1)	260 nm	(2)	280 nm	(3)	340 nm	(4)	412 nm
1.	The	colour of coppe	er and	lphide is				
	(1)	black	(2)	brick red	(3)	sky blue	(4)	yellow
2.	Blo	od groups were	disc	overed by				
	(1)	Roland Ross	(2)	Varmus	(3)	Landsteiner	(4)	Baltimore
₃.	Def	iciency of vitami	n E	CRUSCS				
	(1)	blindness	(2)	impotency	(3)	akin diseases	(4)	bone diseases
4.	ln	spermatogenesis,	, the	acrosome of th	с вр	erm is formed b	y	
	(1)	Golgi complex	(2)	Mitochondria	(3)	Microsomes	(4)	None of these
5.	Wh	ich one of the f	ollow	ving is a viral di	80a8	e? ·		
	(1)	Rickets	(2)	Beri-beri	(3)	Syphilis	(4)	Mcasles
۰6,	The	mad cow disea	se i	n cattle is assoc	iated	l to		
	(1)	prions	(2)	bacteria	(3)	virus	(4)	protozoans
i 7 .	Wh	ich one of the f	ollow	ving acts as a ne	euro	transmitter?		
	{1}	CO	(2)	NO	(3)	O ₂	(4)	NO ₂
A.C.								
74)				11				(P.T.O.)



54.	Abz	ymes are									
	(1)	antibodies		(2)	catalytic an	tigens					
	(3)	antibiotics		(4)	catalytic an	tibodies					
85.	Kra	ntz anatomy is s	een in								
	{1}	all monocots									
	(2)	all dicots									
	(3) monocots and dicots with C4 pathway										
	(4)	legumes									
		900 -	1000 B. 1000 B. 100 B.	¥							
56.	Cor	vergent evolution	is illustrated t	by							
	(1)	rate and dogs		(2)	(2) starfish and cuttlefish						
	(3)	bacterium and p	protozoans	(4)	doglish and whale						
	110	ich of the followi	we in a etronge	et acid?							
57.	WD	ncu of the ionowi	ing is a secondo			22					
	(1)	Cl ₂ CHCOOH		(2)	CIF ₂ CCOO	н					
	(3)	F ₃ CCOOH		(4)	СН3СООН						
	786	nich one of the fo	Moudes is a ha	nic amin	o acid?						
55.	WI					141					
	(1)	Lysine	(2) Glycine	(3)	Threonine	(4)	Tyrosine				
50 .	ፐክ	e hybridized state	e of carbon in (CH ₃ —C■	CH is						
		sp ² and sp				(4)	sp ³				
	(1)	sp- and sp	(z) sp and s	h (a)	- Sp	1.1	rā ≜ Rui				

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(ii) hydrolytic reactions (2) transamination reactions (3) redox reactions (4) unsaturation generating reaction 50. Which of the following is a cofactor? (1) Biotin (2) Tetrahydrofolic acid (3) Capper (4) Methylcobalamin 51. Ribuzymes are (1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography 74)	49.	Lyases catalyse	
50. Which of the following is a cofactor? (I) Biotin (2) Tetrahydrofolic acid (3) Copper (4) Methylcobalamin 51. Ribozymes are (1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(1) hydrolytic reactions	(2) transamination reactions
(1) Biotin (2) Tetrahydrofolic acid (3) Copper (4) Methylcobalamin 51. Ribuzymes are (1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec 1 (2) L (3) Moles per litre sec 1 (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(3) redox reactions	(4) unsaturation generating reaction
(3) Copper (4) Methylcobalamin 51. Ribuzymes are (1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec-1 (2) L (3) Moles per litre sec-1 (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography	50.	Which of the following is a cofactor?	
51. Ribozymes are (1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(1) Biotin	(2) Tetrahydrofolic acid
(1) enzymes using ribose as substrates (2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(3) Copper	(4) Methylcobalamin
(2) RNAs with enzyme activities (3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography	51.	Ribozymes are	
(3) enzymes working on DNA (4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(1) enzymes using ribose as substrate	es
(4) nucleoproteins 52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(2) RNAs with enzyme activities	
52. If concentration is measured in moles per litre and time in seconds, what would be the unit of the rate constant of the first-order reaction? (1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(3) enzymes working on DNA	
(1) sec ⁻¹ (2) L (3) Moles per litre sec ⁻¹ (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(4) nucleoproteins	
(3) Moles per litre sec-1 (4) Moles per litre 53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography	52.	If concentration is measured in moles punit of the rate constant of the first-o	per litre and time in seconds, what would be the order reaction?
53. The enzyme purification in one step may be achieved by (1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation [4) affinity chromatography		(1) sec ⁻¹	(2) L
(1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography		(3) Moles per litre sec-1	(4) Moles per litre
(1) gel filtration chromatography (2) ion-exchange chromatography (3) ammonium sulphate fractionation (4) affinity chromatography	53.	The enzyme purification in one step m	nay be achieved by
(3) ammonium sulphate fractionation (4) affinity chromatography 74)			**************************************
(4) affinity chromatography 74)		(2) ion-exchange chromatography.	
74)		(3) ammonium sulphate fractionation	
		(4) affinity chromatography	
	74)	9	(P.T.O.)



44.	Peptidyltransferase activity is contained	with the							
	(1) large ribosomal subunit								
	(2) small ribosomal subunit								
	(3) tRNA								
	(4) Both large and small ribosomal sub-	unit							
45.	The HIV-1 has one of the following as it	ta genetic material							
	(1) single-stranded DNA	(2) bybrid of DNA and RNA							
	(3) two strands of RNA	(4) double-stranded DNA							
46.	During DNA replication, primase catalys	es synthesis of							
	(1) complementary DNA strand	(2) complementary RNA strand							
	(3) small RNA as a primer	(4) Okazaki fragmenta							
47.	The pH of 0.1 N HCl and that of 0.1 N	acetic acid would be							
	(1) equal								
	(2) pH of HCl would be higher								
	(3) pH of acetic acid would be higher								
	(4) pH of acetic acid be lower								
48.	Which one of the following lacks cellula	ar machinery for protein biosynthesis?							
	(1) Bacteria (2) Fungi	(3) Lichens (4) Viruses							
ig mår	8								
(174)	· ·	r N a sa							



37.	Hydrophobic drug transporters found i	n plaama membrane are kept under
	(1) channels	(2) pumps
	(3) ABC cassettes	(4) group translocators
38.	A gene codes for a protein of 200 amino a	cids length. The size of the gene would be
	(1) 500 bp (2) 600 bp	(3) 200 bp (4) 1000 bp
39.	The forces that help maintain the thr protein is mainly	ee-dimensional functional conformation of a
	(1) covalent	(2) non-covelent
	(3) Both covalent and non-covalent	(4) ionic and non-covalent
40.	Spliceosome removes introns from hnR	NA in
	(1) nucleus (2) mitochondria	(3) chloroplast (4) archaebacteria
41.	D-fructose can rotate the plane of a pla specifically	ne polarized light in a specific direction. It is
	(1) racemic	(2) dextrorotatory
	(3) levorotatory	(4) less dextro- and more levorotatory
42.	The muscle fibers are	
	(1) syncytial (2) perimysium	(3) sacrolemma (4) endomysium
43.	The disease Down syndrome is	
	(1) sex linked (2) autosomal	(3) viral (4) bacterial
(174)	7	(P.T.O.)



31.	Enucleated protoplas	t is known as						
	(1) cybrid	(2) duplast	(3)	cytoplast	(4)	None	of the	above
32.	Ribosomes are							
	(1) Lipoproteins		(2)	Nucleoproteins				
	(3) Olycoproteins		(4)	None of the abo	ove			
33.	The integrated form	of a lysogenic bact	eriop	hage is called				
	(1) prophage		(2)	lysogen				
	(3) cryptic phase		(4)	transducing ph	ase			
	5.							
34.	Which of the following	ng lipids has a net	gea	ative charge?				
	(1) Phosphatidylcho	line	(2)	Phosphatidylser	ine			
	(3) Cholesterol		(4)	Phosphatidyleth	anc	lamin	5	
						*		
35.	The lac repressor is	a		ren				
	(1) RNA binding pro	otein	(2)	DNA binding p	rote	in		
	(3) complex carbohy	ydrate	(4)	complex lipid				
36.	Microtubules are the	e principal compon	cnts	of				
¥	(1) Golgi bodies		(2)	cell walls				
	(3), apindles		(4)	endoplasmic re	ticu	lum		



The total number of codons in the gen	etic code is
(1) 64 (2) 16	(3) 128 (4) 256
The conversion of RNA into cDNA is ca	italysed by
(1) RNA polymerase II	(2) gyrase
(3) reverse transcriptase	(4) topoisomerase
The males of bees, ants and wasps are	· •
(1) X/X (2) haploid	(3) X/O (4) polyploid
The scientific basis of Lamarckism is	
(1) natural selection	(2) germplasm theory
(3) mutation theory	(4) use and disuse
Which of the following is the left hand.	J.C
	d form of DNA?
(1) A-form of DNA	(2) Z-form of DNA
(3) B-form of DNA	(4) C-form of DNA
Which ions are involved in muscle cont	traction?
(1) Sodium and calcium	(2) Sodium and potassium
(3) Calcium and magnesium	(4) Potassium and magnesium
	1 1 THE PARTY OF T
Control of body temperature depends or	a
(1) hypothalamus (2) pituitary	(3) medulla (4) heart
5	(P.T.O.)
	The conversion of RNA into cDNA is call. (1) RNA polymerase II (3) reverse transcriptase The males of bees, ants and wasps are (1) X/X (2) haploid The scientific basis of Lamarckism is (1) natural selection (3) mutation theory Which of the following is the left-handed (1) A-form of DNA (3) B-form of DNA Which ions are involved in muscle contons (1) Sodium and calcium (3) Calcium and magnesium Control of body temperature depends on (1) hypothalamus (2) pituitary.



17.	Whi	ich of the followin	ig gr	owth hormones	stops	premature drop	ping	of fruits/flowers?
	(1)	2,4-D	(2)	NAA	(3)	IAA	(4)	IBA
18.	Ant	ibodies are prod	luced	l by				
	(1)	T-lymphocytes			(2)	virgin B-lymph	ocyte	: 8
	(3)	plasma cells			(4)	dendrites		
19.	The	e predominant a	ntibo	ody in the saliv	a is			
	(1)	IgG	(2)	IgM	(3)	IgA	(4)	IgD
20.	[ra	n is the central	aton	in hemoglobii	n whe	rcas in chlorop	hylle	it is
	(1)	iron	(2)	magnesium	(3)	calcium	(4)	zine
21.	Cal	lcitonin inhibits	the	release of		12		
	(1)	phosphorus fro	nm b	ones	(2)	calcium from	nerve	ts
	(3) calcium from bones				(4)	calcium from	muse	cles
22.	An	tibodies chemics	dly a	ате				
	(1)	proteins			(2)	nucleoprotein	3	
	(3)	lipoproteins			(4)	complex carbo	hydi	rates
23.	WI	hich one of the	follo	wing enzymes i	s spec	cifically involved	l in _l	giyoxalate cycle?
	(1)	Aconitase			(2)	Succinate del	ıydro	genase
	(3)	Isocitrate lyas	е		(4)	Lactate dehyd	lroge	nasc
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					4			
(174)					77			



No. of Questions/प्रश्नों की संख्या : 150

rime/	HH4 ; Z HO	TL8/Ans.				Pal	। इत्राप्तः (प्राप्तः	: 450
Note :	(1)	mark will l	many question be deducted for nartempted qu	r each inc	can. Each que orrect answer.	estion c Zero m	arries 3 marks ark will be aw	. One arded
			स्नों को हल करने क काटा जाएगा। प्र				है। प्रत्येक गलतः ।।	उसर के
	(2)		an one alterna 100se the close		ers seem to be	арргох	imate to the c	orrect
		वदि एकाथिक	वैकल्पिक उत्तर मा	ी उत्तर के नि	कट प्रतीत हों, तो	निकटसम	सही उत्तर हैं।	
1.	The pyrer	oid is four	nd in which o	ne of the	following orga	nelle of	Spirogyra?	
	(1) Chlor	oplast	(2) Vacuole	(3)	Nucleolus	(4)	Mitochondria	
2.	Litmus ar	a natural	dye can be o	btained fo	rm			
	(l) fungi		(2) algae	(3)	bacteria	(4)	lichens	
3.	Double-st	randed RN	A viruses area	ı cailed as	E			
	(1) pox v	irus c s	(2) reoviruse:	(3)	riboviruses	(4)	adenoviruece	
174)				1			n	וחזי

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Mre Beochemisty.

14P/210/5

Question Booklet No.....

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t-swinds - w	- 100 - 100	(To be fill	ed up by	he can	didate by	blue/bl	ack ball-po	oint pen)	<u> </u>	
Roll No.										
Roll No. (Write the	e digits in u	vords)	.,						* * * * * * * * * * * * * * * * *	••••••
Serial No	o of OMR A	inswer Sh	eet			******				
Day and	Date			. * * * 1 * * * 1 * * *			(5	Signature	of invigilator)	

INSTRUCTIONS TO CANDIDATES

(Use only blue/black ball-point 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 tresh 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 Sheet 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 Bookiet 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 also Roll No. and OMR Sheet No. on the Question Booklet.
- 7. Any change 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 ball-point 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 mark).
- 11. For rough work, use the inner back page of the title cover and the blank page at the end of this flooklet.
- Deposit only the OMR 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-पृष्ठ पर दिये वर्ष हैं।

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