# Mse im Applied Microbiology Coder https://pathfind

https://pathfinderabac

Set No. 1

Question Booklet No.....

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-	- (	To be filled	l up by the co	andidate l	y blue/b	lack ball-point pen)	
Roll No.							
Roll No. (Write the	digits in wo	rds)		ર્વ	叫	19	<b>2</b> •
Serial No.	of OMR An	swer Shee	t			10	
Day and	Date		*************			(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)

- Within 30 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 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.
- 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 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 Booklet.
- 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.

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[No. of Printed Pages: 20+2]

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17P/292/24 Set No. 1

No. of Questions: 120

Time: 2 Hours

Full Marks: 360

Note:

- (1) Attempt as many questions as you can. Each question carries 3 marks. One mark will be deducted for each incorrect answer. Zero mark will be awarded for each unattempted question.
- (2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one
- 1. Specific immunity can be acquired either naturally or artificially and involves
  - (1) antibodies
  - (2) antigens
  - (3) the classical complement pathway
  - (4) All of these
- 2. Which does not provide long-term immunity?
  - (1) Artificially acquired active immunity
  - (2) Artificially acquired passive
  - (3) Naturally acquired active immunity
  - (4) None of these

1

(40)

(P.T.O.)

3.	Which one of the following is the major immunoglobulin in human serum, accounting for 80% of the immunoglobulin pool?						
	(1) IgA	(2) IgD	(3) IgG	(4) IgM			
4.	Which immunoglo	bulin is the least	prevalent?				
	(1) IgA	(2) IgD	(3) IgE	(4) IgM			
5.	Which one of the	following is useful	to STIMULATE	antibody production?			
	(1) An adjuvant	(2) A hapten	(3) Antiserum	(4) Purified antigen			
6.	Which one of the	following is a free	-living nitrogen fi	xing organism?			
	(1) Rhizobium	(2) Azotobacter	(3) E. coli	(4) Bacillus sp.			
7.	The major advant	age of plant with	VAM is				
	(1) increased N <sub>2</sub>	absorption	(2) increased P	absorption			
	(3) increased K a	bsorption	(4) increased M	n absorption			
8.	Which one of the	following is $N_2$ fix	king actinomycetes	s?			
	(1) Acetobacter	(2) Azotobacter	(3) Frankia	(4) Azospirillum			
9.	Example of benef	īcial microbe-plant	t-soil interactions	is			
	(1) organic matte	er decomposition	(2) symbiotic n	itrogen fixation			
	(3) mycorrhizal f		(4) All the above	ve are true			
10.	First disease of 1	plants to be recogn	nized as				
ASSAULT:	(1) tobacco mosa (3) sugarcane m	osaic virus	(4) bean mosai	ic virus			
581 <u>07</u> 0			2				

11.	Anaerobic bacteria like Clostridium	may reduce nitrate to ——— directly.
	(1) nitrite (2) ammonia	(3) nitrogen (4) hydroxylamine
12.	Sterile container is	
	(1) free from all pathogens	(2) free from all micro-organisms
	(3) free from all bacteria	(4) All of the above
13.	Who gave eight kingdom system of	classification?
	(1) H. Hellriegel	(2) Cavalier-Smith
	(3) Carl Woese	(4) Sergei Winogradsky
14.	The structure of cell is formed by	
	(1) nucleus (2) microfibrae	(3) microtubules (4) cell membrane
15.	Holding period for hot air oven is	
	(1) 140 °C for 1 hour	(2) 160 °C for 1 hour
	(3) 140 °C for ½ hour	(4) 180 °C for 1 hour
16.	Agarose gel method was first done	by.
	(1) Border (2) Qudin	(3) Neufeld (4) Lord Liste
17.	Ziehl-Neelsen stain is	No. 1995
	(1) metachromatic stain	(2) nuclear stain
	(3) relief stain	(+) acid-fast stain
(40)	3	
(40)		(P.T.O.)

18.	First virus to be studied was		
	(1) pox virus	(2)	rabies virus
	(3) hepatitis virus	(4)	tobacco mosaic virus
19.	It was first showed that the mosaic	dise	ease of tobacco is due to virus by
	(1) van Leeuwenhoek	(2)	Edward Jenner
	(3) Iwanowsky	(4)	Loeffler
20.	The fungal nucleus		
	(1) contains true chromosomes		
	(2) has a nuclear membrane		
	(3) differs from the bacterial nucleus	s	
	(4) All of these		*:
21.	The most commonly used micro-orga	anis	m in alcohol fermentation is
	(1) Aspergillus niger	(2)	Bacillus subtilis
	(3) Saccharomyces cerevisiae	(4)	Escherichia coli
22.	Large vessel containing all the parts desired micro-organisms is called	and	condition necessary for the growth o
	(1) bio reactor (2) auto reactor	(3)	impeller (4) None of these
23.	Basic principle in industrial microbi	olog	y is
	(1) suitable growth conditions	(2)	fermentation
	(3) providing aseptic conditions	(4)	All of these
	4		

Which one of the following organic groups are found in naturally occurrin amino acids?	g					
(1) Guanidinium ion (2) Indole						
(3) Imidazole (4) All of these						
The pH of a solution is determined by						
(1) bacteria (2) yeast (3) fungi (4) None of these						
Molecules in which the atoms are held together by ——— bonds have the strongest chemical linkages.	e					
(1) non-covalent (2) covalent (3) ionic (4) hydrogen						
Buffer solutions						
(1) will always have a pH of 7						
ALTERNAL SOLICIONES SO						
11 APP 12						
(4) tend to maintain a relatively constant pH						
Most of the important functional groups in biological molecules contain						
(1) oxygen and/or nitrogen and are acidic						
(2) oxygen and a phosphate						
(3) nitrogen and a phosphate						
(4) oxygen and/or nitrogen and are polar						
Which one of the following forces is the most favourable for protein folding?	)					
(1) Conformational entry (2) Hydrophobic interactions						
19 AND SANDERS	J					
	(1) Guanidinium ion (2) Indole (3) Imidazole (4) All of these  The pH of a solution is determined by (1) bacteria (2) yeast (3) fungi (4) None of these  Molecules in which the atoms are held together by — bonds have the strongest chemical linkages. (1) non-covalent (2) covalent (3) ionic (4) hydrogen  Buffer solutions (1) will always have a pH of 7 (2) are rarely found in living systems (3) cause a decrease in pH when acids are added to them (4) tend to maintain a relatively constant pH  Most of the important functional groups in biological molecules contain (1) oxygen and/or nitrogen and are acidic (2) oxygen and a phosphate (3) nitrogen and a phosphate					

30.	Fructose is metabolized by		#
	(1) fructose 1-phosphate pathway		
	(2) fructose 6-phosphate pathway		
	(3) glyceraldehyde 3-phosphate path	way	
	(4) Both (1) and (2)		¥7
31.	Humans are unable to digest		40
	(1) starch	(2)	complex carbohydrates
	(3) denatured proteins	(4)	cellulose
32.	The key enzyme in the regulation of	fatt	ty acid synthesis is
	(1) acetyl CoA carboxylase	(2)	AMP activated proteinkinase
	(3) protein phosphatase	(4)	None of these
33.	Beta pleated sheets are examples of	pro	tein's
	(1) primary structure	(2)	secondary structure
	(3) tertiary structure	(4)	quaternary structure
34.	Phospholipid contains		4
	(1) hydrophilic heads and hydropho	bic	tails
	(2) long water-soluble carbon chain		B
	(3) positively charged functional gro	ups	•
	(4) both (2) and (3)		
	DAGE 1003 GREET		

35.	Cellulose fibers rese	mble with the p	rote	n structure in	the form of	
	(1) β-sheets (2	2) a-heli	(3)	β-turns	(4) None of	these
36.	The rate of Kill for	any bacteria is a	a			
	(1) zero order reacti	ion	(2)	1st order reac	ction	•
	(3) 2nd order reacti	on	(4)	3rd order rea	ction	
37.	Metalloproteins cyto	chrome oxidase	is p	aired with —	atom.	49
	(1) iron (2	2) magnesium	(3)	copper	(4) cobalt	
38.	Dissociation of water	r can be expres	sed	as		
	(1) K = [H <sup>+</sup> ][OH <sup>-</sup> ]/	[H <sub>2</sub> O]	(2)	$K = (H^+)(OH^-)$	]/[OH-]	
	(3) $K = [H^+][H_2O]/[$	H <sub>2</sub> O ]	(4)	K = [H+][OH-	]/[H <sup>+</sup> ]	
39.	Isoelectric point is o	denoted by				
	(1) pl (2	2) pH	(3)	pO	(4) pE	
40.	A molecular techniq primer can be ampl	ue in which DN ified is known a	A se	quences betwee	en two oligom	acleotide:
	(1) southern blottin	g	(2)	northern blott	ting	
	(3) PCR		(4)	DNA replication	on	
41.	Allosteric enzymes a	ıre				
	(1) larger than simp	le enzymes				
	(2) smaller than sin	The second lives and the second				
	(3) larger and more					
	(4) smaller than sin	iple enzyme but	not	Compleme	9	
(40)		7	-		e	(P.T.O.)

- **42.** Why does the glycolytic pathway continue in the direction of glucose catabolism?
  - (1) There are essentially irreversible reaction that act as the driving force for the pathway
  - (2) High levels of ATP keep the pathway going in a forward direction
  - (3) The enzymes of glycolysis only function in one direction
  - (4) Glycolysis occur in either directions
- 43. The release energy obtained by oxidation of glucose is stored as
  - (1) concentration gradient across a membrane driving force for the pathway
  - (2) ATP
  - (3) ADP
  - (4) NAD positive
- 44. The yield of the antibiotics depends upon
  - (1) pH of the medium
- (2) age of the inoculum
- (3) composition of the medium
- (4) All of these
- 45. The phospholipids present in cytoplasm membrane of archaebacteria is
  - (1) phosphoglycerides
  - (2) polyisoprenoid
  - (3) polyisoprenoid branched chain lipids
  - (4) None of the above

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	(1) presence of chitin in cell wall
	(2) presence of murrain in cell walls
	(3) presence of protein in cell walls
	(4) absence of cell wall itself
47.	Cell theory includes all of the following except
	(1) all organisms are composed of one or more cells
	(2) the cell is the most primitive form of life
	(3) the cell is the structural unit of life
10	(4) cells arise by division of pre-existing cells
48.	Which one of the following structure is the smallest?
	(1) Viroid (2) Hydrogen atom
	(3) Bacterium (4) Mitochondrion
49.	Which one of the following may account for the small size of the cells?
	(1) Rate of diffusion
	(2) Surface area/volume ratio
	(3) No. of mRNA that can be produced by nucleus
	(4) All of the above
	g
<b>(40</b> )	(P.T.O.)

46. Mycoplasmas are different from the other prokaryotes by

50.	A plasmids can be considered as a suitable cloning vector if							
	(1) it can be readily isolated from the cells	(1) it can be readily isolated from the cells						
	(2) it possess a single restriction site for one or more restriction enzymes							
	(3) insertion of foreign DNA does alter its replication properties							
	(4) All of the above	(4) All of the above						
51.	. Which one of the following vector can maint DNA?	one of the following feetor and manners are many						
	(1) YAC (2) Cosmids (3) Pl	asmid (4) Phage						
52.	. In aerobic respiration, the terminal electron	n acceptor is						
	(1) oxygen (2) hydrogen (3) ni	trogen (4) nitate						
53.	Which one of the following does not p photosynthesis?	roduce oxygen as a product of						
	(1) Oak trees (2) Pt	urple sulphur bacteria						
	(3) Cyanobacteria (4) Ph	nytoplankton						
54.	. What are the main constituents of culture	for animal cell growth?						
	(1) Glucose and glutamine (2) G	rowth factors						
	(3) Cytokines (4) Al	ll of these						
55.	5. Which one of the following ranks the molecul	les in the correct order by size?						
	(1) Water-sucrose-glucose-protein (2) Pr	rotein-water-glucose-sucrose						
	(3) Water-protein-sucrose-glucose (4) Pr	rotein-sucrose-glucose-water						
(40)	10							

56.	Linkage present	in cellulose molecu	ıle is	<u>S</u>					
	(1) $\beta(1\rightarrow 4)$	(2) $\alpha (1 \rightarrow 4)$	(3)	$\alpha (1 \rightarrow 6)$	(4)	Both (2) and (3	3)		
57.	The following sul	ostances are cell in	nclus	ions except					
	(1) melanin	(2) glycogen	(3)	lipids	(4)	centrosome			
58.	Which one of the	following has ison	enzyi	ne?					
	(1) Lactic dehydr	ogenase	(2)	Hexokinase					
	(3) Citrate synthe	etase	(4)	Aldolase					
<b>59</b> .	Synthesis of mRI	NA on DNA templa	te is						
	(1) unidirectional			19 500		12			
	(2) bidirectional	(2) bidirectional							
	(3) bidirectional with the help of primer								
	(4) unidirectional	with the help of	prim	cr					
60.	How many energ	y bonds are expec	ted i	n the formation	of	a peptide bond?	ľ		
	(1) 2	(2) 4	(3)	6	(4)	3			
61.	Movement of cancalled	cer cells to a new	site,	where a secon	dary	tumour begins	is		
	(1) vascularization	n,	(2)	metastasis					
	(3) promotion		(4)	amaplasia					
62.	The predominant	antibody in saliva	is						
	(1) IgG	(2) <b>igE</b>	(3)	IgA	(4)	IgD			
(40)		4 44		_		(P.T.C	).)		
				7 C C C C C C C C C C C C C C C C C C C					

63.	Diseases in which tissue are called?	a person's immune	e system attacks th	ne person's own normal	
	(1) Secondary imm	nune diseases	(2) Autoimmune	diseases	
	(3) Primary immu	ne diseases	(4) Clonal selection	on diseases	
64.	Which one of the	following cell type	is haploid?	all and a second	
	(1) Primary sperm	atocyte	(2) Spermatogoni	um	
	(3) Sertoli cell		(4) Secondary sp	ermatocyte	
65.	The kidney forms	from			
	(1) endoderm	(2) somites	(3) mesoderm	(4) ectoderm	
66.	Which one of the following is gradually reduced and degenerated in ageing according to immunity theory?				
	(1) Thyroid	(2) Parathyroids	(3) Thymus	(4) Pituitary	
67.	The visible produ	ct of photosynthes	sis is		
	(1) glucose	(2) cellulose	(3) starch	(4) fructose	
68.	The reservoir for	nitrogen is			
	(1) the atmosphe	re	(2) rocks		
	(3) ammonia		(4) nitrates		
69.	Which one of the	following cannot	move freely in and	dout of a capillary?	
	(1) Sugar		(2) Oxygen		
	(3) Carbon dioxi	de .	(4) Plasma prote	ein	
	1-1		12		
(40)					

70.	The size of filtration slits of glomerulus are approximately								
	(1) 10 nm (2)	15 nm	(3)	20 nm	(4) 25 n	m	- TES		
71.	When different genes phenotype, this pheno				y that in	ifluences	the		
	(1) epistatic		(2)	pleiotrophic					
	(3) codominance	88	(4)	incomplete dor	ninant				
72.	Plasmids do which of	the following?		# # E					
	(1) Direct synthesis of conjugation pili								
	(2) Provide resistance to certain antibiotics								
	(3) Induce the formation of tumors in plants								
	(4) All of the above			20					
73.	The most common let	nal genetic dise	ease	in the United	States is				
	(1) sickle cell disease	70	(2)	cystic fibrosis					
	(3) Huntington's disea	se	(4)	haemophilia					
74.	Longest cells in huma	n body are		2					
	(1) leg muscle cells	\$5	(2)	bone cells	68				
	(3) nerve cells		(4)	heat muscle ce	ells				
<b>75</b> .	According to botanical	nomenelatura	واسر	ich are not alle	wed				
	(1) synonyms (2)	<del>ordony-</del> -	(3)	tautonyms	(4) isony	ms			
(40)		13			\$10 MG	<b></b>			
						(P.T.	0.)		

In groundnut the root is			
(1) epiphytic	(2	)	napiform
(3) nodulated	(4	)	photosynthetic
The cells which act as parasites in the body			
(1) schwann cells	(2	)	hepatocytes
(3) Kupffer's cells	(4	)	cancer cells
Which one of the following ecosystems have more productivity in an unit ar grassland?			
(1) Grassland	(2	)	Marine ecosystem
(3) Pond ecosystem	(4	•)	Tree ecosystem
When birth-rate equals death rate			
(1) a population grows rapidly			
(2) density-dependant limiting factors do not affect the population			
(3) a population goes through up and down cycles (4) the size of a population remains constant			
(1) Soil minerals (2) Predators	(3	3)	) Fire (4) Rainfall
Last stage of plant succession is			
(1) ecotype	(2	2)	serial community
(3) biotic community	. (	4)	ecotone
	14		
	(1) epiphytic (3) nodulated  The cells which act as parasites in (1) schwann cells (3) Kupffer's cells  Which one of the following ecosystegrassland? (1) Grassland (3) Pond ecosystem  When birth-rate equals death rate (1) a population grows rapidly (2) density-dependant limiting fac (3) a population goes through up (4) the size of a population remain which one of the following is not (1) Soil minerals (2) Predators  Last stage of plant succession is (1) ecotype	(1) epiphytic (2) (3) nodulated (4) The cells which act as parasites in the (1) schwann cells (2) (3) Kupffer's cells (4) Which one of the following ecosystems grassland? (1) Grassland (2) (3) Pond ecosystem (4) When birth-rate equals death rate (1) a population grows rapidly (2) density-dependant limiting factors (3) a population goes through up and (4) the size of a population remains of Which one of the following is not an act (1) Soil minerals (2) Predators (3) Last stage of plant succession is (1) ecotype (3) biotic community (4)	(1) epiphytic (2) (3) nodulated (4) The cells which act as parasites in the (1) schwann cells (2) (3) Kupffer's cells (4) Which one of the following ecosystems is grassland? (1) Grassland (2) (3) Pond ecosystem (4) When birth-rate equals death rate (1) a population grows rapidly (2) density dependant limiting factors of (3) a population goes through up and (4) the size of a population remains contained the size of a population size of a popul

82.	Peptone water medium is an examp	le o	f	
	(1) synthetic medium	(2)	semi-synthetic medium	
	(3) differential medium	(4)	None of these	
83.	Example of anaerobic medium is			
	(1) Robertson cooked meat medium			
0	(2) nutrient agar			
	(3) nutrient broth			
	(4) MacConkey's agar			
84.	. Chemical preservatives do not include			
	(1) organic acids	(2)	sulphates	
	(3) alcohol	(4)	starch	
85.	Most current gene therapy trials tar	get	₽.,	
	(1) SCID deficiency	(2)	cancer	
	(3) cystic fibrosis	(4)	HIV	
86.	Transgenic animals used for			
	(1) drug discovery	(2)	toxicological studies	
	(3) pharmacokinetic studies	(4)	All of these	
87.	The cross of plants results in	_		
	(1) cross breeds (2) hybrids	(3)	inbreed (4) None of these	
(40)	15		(P.T.O.)	

88.	Augmentation gene therapy is the example of		
	(1) germ-line gene therapy	(2) somatic gene therapy	
	(3) both (1) and (2)	(4) None of these	
89.	In ELISA which of the molecule is adsorbed on the solid stationary pha		
	(1) Enzyme (2) Antigen	(3) Antibody (4) Both (2) and (3)	
90.	In an electron microscope higher ma	agnification is due to the use of	
	(1) higher wavelengths of light	(2) high velocity electrons	
	(3) achromatic lenses	(4) magnetic system	
91.	Which one of the following species of clostridium is responsible for formation dark green to black colours in cheese?		
	(1) Clostridium tyrobutyricum	(2) Clostridium sporogenes	
	(3) Clostridium herbarum	(4) None of these	
92.	Human papilloma virus causes which one of the following?		
	(1) hepatitis	(2) cervical cancer	
94	(3) AIDS	(4) oral cancer	
93.	Distance between each turn of the DNA helix is		
	(1) 20 Å (2) 28 Å	(3) 34 Å (4) 42 Å	
94.	Which one of the following are incap	pable of producing toxins in the body?	
	(1) Clostridium tetani	(2) Human immunodeficiency virus	
	(3) Escherichia coli	(4) Clostridium botulinum	
40)	16	5	

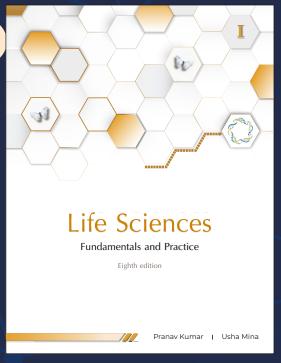
95.	Koch's postulates are used to relate				
	(1) a specific micro-organism to a specific disease				
	(2) spontaneous generation of micro-organism to	(2) spontaneous generation of micro-organism to organic matter			
	(3) production of toxins to disease				
	(4) transmission of sleeping sickness to teetse flies				
96.	Phylogenetic tree of bacteria is constructed based on the sequencing of				
	(1) 18S rRNA (2) 16S rRNA	<b>L</b>			
	(3) DNA (4) All of the	above			
97.	Tubulin in cilia and flagella are examples of				
	(1) hormonal proteins (2) storage p	roteins			
	(3) motility proteins (4) defence p	roteins			
98.	S. Probiotics are	# 888			
3	(1) cancer inducing microbes (2) kind of fo	od allergens			
	(3) live microbial food supplement (4) safe antib	piotics			
99.	The polysaccharide used to solidify bacterial growth media is				
	(1) gelatin (2) agar (3) starch	[4] All of the above			
100.	Micro-organisms that survive in the absence of me				
	(1) they produce fleg-11 (2) metabolize				
	(3) have no cell membranes (4) produce s	•			
(40)	17				
,I		. (P.T.O.)			

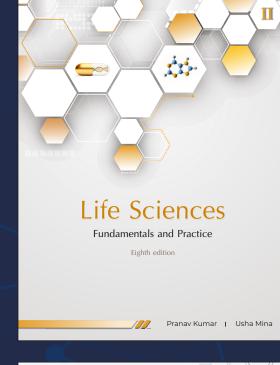
101.	Murein is a		85	
	(1) polypeptide	3	(2) peptidoglycan	
	(3) polysaccharid	e .	(4) lipid	
102.	Most case of tet	anus are due		
	(1) deep wounds		(2) respiratory droplets	
	(3) bites arthrope	ods	(4) consuming unpasteurized	d
103.	The noncoding R	NA include	25	
	(1) rRNA		(2) tRNA	
	(3) mRNA		(4) Both rRNA and tRNA	
104.	4. Tetracyclines are antibiotics that prevent the synthesis of			
	(1) cell wall		(2) nucleic acid	
	(3) protein ,		(4) cytoplasmic membrane	
105.	What is the mean	n number of bases	per twist in zDNA?	
	(1) 10	(2) 9	(3) 11 (4) 12	
106.	. Which among these is not a mycotoxin?			
			(3) Ochratoxin (4) d-Tox	in
107.	Metal that is use	d as a catalyst in	hydrogenation of oils is	
	(1) Ni	(2) Pb	(3) Zn (4) Cd	
(40)		1	8	

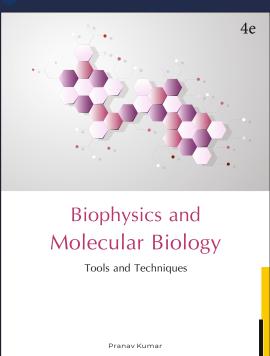
108.	PS I and PS II absorb light of different wavelengths due to				
	(1) the presence of different soluble	electron carriers			
	(2) different locations is the chlorop	olast			
	(3) the proteins associated with each	h reaction center	chlorophyll		
	(4) different types of reaction centre	chlorophylls in	each photosystem		
109.	A common isotope of iodine used in radioimmunoassay is				
	(1) 100 I (2) 125 I	(3) 150 I	(4) 175 I		
110.	CAP, the catabolic activator protein,	, has a role in th	e expression of the		
	(1) Lac operon (2) Trp operon	(3) Ara operon	(4) His operon		
111.	Recombinant DNA technology is rela	ated with			
	(1) Hebert Boyer	(2) Charles Dar	win		
	(3) Stanley Cohen	(4) Both (1) and	d (3)		
112.	The purpose of cloning is				
	(1) replacing original genotype				
	(2) preserving genotype				
	(3) production of hGH gene in E. coli				
	(4) None of the above	· V	**		
113.	Golgi bodies originate from				
	(1) plasma membrane	(2) mitochondri	а		
	(3) endoplasmic reticulum	(4) sytoplasm	•		
114.	The term 'Ecology' was first coined	by			
	(1) Elements (2) Reiter	(3) Tansley	(4) Odum		
40)	19		(4) Odum		
	×		(P.T.O.		

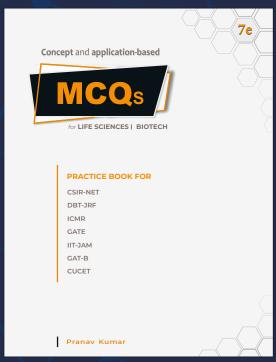
115.	Ecosystem have			
	(1) cycling of materials and flow of energy			
	(2) flow of materials and cycling of energy			
	(3) cycling of both materials and energy			
	(4) flow of both materials and energ	<b>E</b> Y		
116.	Which is not an example of cytoplasmic inheritance?			
	(1) Plastid inheritance	(2) Kappa particl	e inheritance	
	(3) Sigma particle inheritance	(4) Female sterili	ty in maize	
117.	When a gene exist in more than on	e form the differen	t terms are called	
	(1) heterozygous	(2) complementar	y gene	
	(3) genotype	(4) alleles		
118.	Fungi have been defined as chlorop	hyll (-) less non-va	scular plants by	
	(1) Mundkur (2) Alexopoulos		(4) Butler	
119.	Lichens reproduced by			
	(1) Soredia (2) Gonidia	(3) Conidia	(4) ·Oidia	
120.	A hormone used for inducing morphogenesis in plant tissue culture			
	(1) abscisic acid	(2) gibberellins		
	(3) cytokinins	(4) ethylene		
	**	*		
	24	0	D/7( <b>40</b> )—1233	
	× 2	*		











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## SEAL

### अभ्यर्थियों के लिए निर्देश

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

- प्रश्न पुस्तिका मिलने के 30 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा 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 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 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 वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक 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 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 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 वृत्तों को गाढ़ा करने पर अधवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
- 10. ध्यान दें कि एक बार स्वाही द्वारा अंकित उत्तर बदला नहीं जा सकता है। 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. रफ़ कार्य के लिये प्रश्न-पुस्तिका 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 सभाप्त होने से यहले 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।