0565

Set No. 1

17P/292/24

Mse in Applied microbiology CodeNo,

Question Booklet No......

		•
(To be filled	up by the candidate by blue/bl	ack ball-point pen)
Roll No.		
Roll No. (Write the digits in words)	2017	192.
Serial No. of OMR Answer Sheet		133
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.
- Do not bring any loose paper, written or blank, inside the Examination Hall except the Admit Card without its envelope.
- 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.
- 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.
- 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.
- 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.
- 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).
- For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
- 12. 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 गए हैं]

[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)

3.	Which one of the accounting for 80					lin	in humar	serum,
	(1) IgA	(2)	lgD	(3)	IgG	(4)	IgM	
4.	Which immunoglo	buli	n is the least p	orev	alent?			
	(1) IgA	(2)	IgD	(3)	IgE	(4)	lgM	
5.	Which one of the	follo	owing is useful	to	STIMULATE an	tibo	dy produc	tion?
	(1) An adjuvant	(2)	A hapten	(3)	Antiserum	(4)	Purified	antigen
6.	Which one of the	folk	owing is a free-	livir	ng nitrogen fixi	ng c	organism?	
	(1) Rhizobium	(2)	Azotobacter	(3)	E. coli	(4)	Bacillus	sp.
7.	The major advant	age	of plant with V	/AM	is			
	(1) increased N ₂	absc	orption	(2)	increased P a	bsot	ption	
	(3) increased K a	bsor	ption	(4)	increased Mn	abs	orption	
8.	Which one of the	foll	owing is N ₂ fix	ing	actinomycetes?			
	(1) Acetobacter	(2)	Azotobacter	(3)	Frankia	(4)	Azospiril	lum
9.	Example of benef	ficial	microbe-plant-	-soil	interactions is	ì		
	(1) organic matte						n fixation	
	(3) mycorrhizal f				All the above			
10	- theore of t			ized	as			
10.	(1) tobacca mose	aic "	dur-			vui	virus	
	(3) sugarcane m	osai	c virus	(4	bean mosaic	viru	ıs	
	(3) Sugarous							

11.	Anaerobic bacteria like Clostridium may r	educe 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 classi	fication?
		Cavalier-Smith
		Sergei Winogradsky
		oe.go: winogradony
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	35.70m
11.		
	(1) metachromatic stain (2)	nuclear stain
	(3) relief stain	acto-fast stain
	3	_
(40)	· - <u></u> -	(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	disease 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	<i>₹</i>	
21.	The most commonly used micro-orga	anism 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	of
	(1) bio reactor (2) auto reactor	(3) impeller (4) None of these	
23.	Basic principle in industrial microbi	iology is	
	(1) suitable growth conditions	(2) fermentation	
	(3) providing aseptic conditions	(4) All of these	

24.	Which one of the following organiamino acids?	c groups are found	in naturally occurring
	(1) Guanidinium ion	(2) Indole	
	(3) Imidazole	(4) All of these	ric .
25.	The pH of a solution is determined	d by	
	(1) bacteria (2) yeast	(3) fungi	(4) None of these
26.	Molecules in which the atoms are strongest chemical linkages.	e held together by -	—— bonds have the
	(1) non-covalent (2) covalent	(3) ionic	(4) hydrogen
27.	Buffer solutions	2:	
	(1) will always have a pH of 7		
	(2) are rarely found in living syste	ms	25
	(3) cause a decrease in pH when	acids are added to t	hem
	(4) tend to maintain a relatively of	onstant pH	
28.	Most of the important functional g	roups in biological a	nolecules contain
	(1) oxygen and/or nitrogen and ar		
	(2) oxygen and a phosphate	-	
	(3) nitrogen and a phosphate		
	(4) oxygen and/or nitrogen and ar	e polar	
29.	Which one of the following forces i		
	(1) Conformational entry	_ (2) Hydronhobic j	nteractions
	(3) van der Waals interactions		
(40)	_ 5		
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(40)

30.	Fructose is metabolized by		£
	(1) fructose 1-phosphate pathway		
	(2) fructose 6-phosphate pathway		
	(3) glyceraldehyde 3-phosphate pat	way	
	(4) Both (1) and (2)	20	
31.	Humans are unable to digest		E E
	(1) starch	(2) comp	lex carbohydrates
	(3) denatured proteins	(4) cellul	ose
32.	The key enzyme in the regulation of	fatty 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	protein's	ler .
	(1) primary structure	(2) secon	dary structure
	(3) tertiary structure	(4) quate	rnary structure
34.	Phospholipid contains		20
	(1) hydrophilic heads and hydroph	bic tails	
	(2) long water-soluble carbon chair	S '	
	(3) positively charged functional gr	ups	*
	(4) both (2) and (3)		

		98				
35.	Cellulose fibers r	esemble with the p	prote	in structure in	the form of	
	(1) β-sheets	(2) a-heli	(3)	β-turns	(4) None of	these
36.	The rate of Kill f	or any bacteria is	а			
	(1) zero order re	action	(2)	1st order rea	ction	
	(3) 2nd order re-	action	(4)	3rd order rea	action	
37.	Metalloproteins o	ytochrome oxidase	is p	aired with —	— atom.	27
	(1) iron	(2) magnesium	(3)	copper	(4) cobalt	
38.	Dissociation of w	ater can be expres	ssed	as		
	(1) K = [H+][OH]/[H ₂ O]	(2)	$K = (H^+)(OH^-)$	[/[OH-]	
	(3) $K = [H^+][H_2C]$]/[H ₂ O]	(4)	$K = [H^+][OH^-]$]/[H ⁺]	
39.	Isoelectric point	is denoted by				
	(1) pl	(2) pH	(3)	pO	(4) pE	
40.	A molecular tech primer can be a	nique in which DN nplified is known a	IA se as	quences betwe	en two oligon	ucl c otides
	(1) southern blot	ting	(2)	northern blot	iting	
	(3) PCR		(4)	DNA replicati	on	
41,	Allosteric enzyme	es are				
	(1) larger than s	imple enzymes				
	(2) smaller than	simple enzymes	*****	2020000		
		ore complex than s				
	(4) smaller than	simple enzyme but	not	Complex	19	
(40)		7	. —		8	
men Man						(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

	(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
13	(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
(AO)	9
(40)	(P.T.O.)

46. Mycoplasmas are different from the other prokaryotes by

D. A plasmids can be considered as a suitable	cloning vector if
(1) it can be readily isolated from the cells	
(2) it possess a single restriction site for on	ne or more restriction enzymes
(3) insertion of foreign DNA does alter its re-	eplication properties
(4) All of the above	
. Which one of the following vector can mainta DNA?	ain the largest fragment of foreign
(1) YAC (2) Cosmids (3) Pla	smid (4) Phage
. In aerobic respiration, the terminal electron	acceptor is
(1) oxygen (2) hydrogen (3) nit	rogen (4) nitate
Which one of the following does not pr photosynthesis?	oduce oxygen as a product of
(1) Oak trees (2) Pur	rple sulphur bacteria
(3) Cyanobacteria (4) Phy	ytoplankton
. What are the main constituents of culture t	for animal cell growth?
(1) Glucose and glutamine (2) Gr	owth factors
(3) Cytokines (4) All	of these
5. Which one of the following ranks the molecule	es in the correct order by size?
(1) Water-sucrose-glucose-protein (2) Pro	otein-water-glucose-sucrose
(3) Water-protein-sucrose-glucose (4) Pro	otein-sucrose-glucose-water
10	
	(1) it can be readily isolated from the cells (2) it possess a single restriction site for or (3) insertion of foreign DNA does alter its r (4) All of the above Which one of the following vector can maintant DNA? (1) YAC (2) Cosmids (3) Planta aerobic respiration, the terminal electron (1) oxygen (2) hydrogen (3) nit Which one of the following does not prephotosynthesis? (1) Oak trees (2) Put (3) Cyanobacteria (4) Ph What are the main constituents of culture is (1) Glucose and glutamine (2) Gr (3) Cytokines (4) All Which one of the following ranks the molecular is (1) Water-sucrose-glucose-protein (2) Protein-sucrose-glucose (3) Water-protein-sucrose-glucose (4) Protein-sucrose-glucose (5) Protein-sucrose-glucose (6) Protein-sucrose-glucose (7) Protein-sucrose-glucose (8) Protein-sucrose-glucose (9) Protein-sucrose-glucose (1) Water-protein-sucrose-glucose (1) Protein-sucrose-glucose (2) Protein-sucrose-glucose (3) Water-protein-sucrose-glucose (4) Protein-sucrose-glucose (5) Protein-sucrose-glucose (6) Protein-sucrose-glucose (7) Protein-sucrose-glucose (8) Protein-sucrose-glucose (9) Protein-sucrose-glucose (1) Protein-sucrose-glucose (1) Protein-sucrose-glucose (2) Protein-sucrose-glucose (3) Water-protein-sucrose-glucose

56.	Linkage present in	n cellulose molecul	le is					
	(1) β (1 \rightarrow 4)	(2) $\alpha (1 \rightarrow 4)$	(3) $\alpha (1 \rightarrow 6)$	(4) Both (2) and (3)				
57.	The following sub	stances are cell in	clusions except					
	(1) melanin	(2) glycogen	(3) lipids	(4) centrosome				
58.	Which one of the	following has isoes	nzyme?					
	(1) Lactic dehydro	ogenase	(2) Hexokinase					
	(3) Citrate synthe	tase	(4) Aldolase					
59.	Synthesis of mRN	A on DNA templat	e is					
	(1) unidirectional		18 AMS	14				
	(2) bidirectional							
	(3) bidirectional with the help of primer							
	(4) unidirectional	with the help of p	rimer					
60.	How many energy	bonds are expecte	ed in the formation	n of a peptide bond?				
	(1) 2	(2) 4	(3) 6	(4) 3				
61.	Movement of cano	er cells to a new s	site, where a secon	dary tumour begins is				
	(1) vascularization	••• •••• L	(2) metastasis					
	(3) promotion	(P)	(4) amaplasia					
62.	The predominant	entibody in saliva	is					
	(1) IgG	(2) IgE	(3) IgA	(4) IgD				
(40)		11		(P.T.O.)				

63.	Diseases in which tissue are called?	a person's immune	e systen	n attacks th	e per	son's own normal		
	(1) Secondary imn	nune diseases	(2) Au	toimmune	disea	ses		
	(3) Primary immu	ne diseases	(4) Clo	onal selection	on di	scases		
64.	Which one of the	following cell type	is hap	loid?	ži.			
	(-)			(2) Spermatogonium				
	(3) Sertoli cell		(4) Se	condary sp	ermat	cocyte		
65.	The kidney forms	from						
	(1) endoderm	(2) somites	(3) m	esoderm	(4)	ectoderm		
66.	Which one of the according to imm	following is gradunity theory?	ually re	duced and	dege	nerated in ageing		
	(1) Thyroid	(2) Parathyroids	(3) Th	hymus	(4)	Pituitary		
67.	The visible produ	ct of photosynthes	is is					
	(1) glucose	(2) cellulose	(3) st	tarch	(4)	fructose		
68.	The reservoir for	nitrogen is						
	(1) the atmosphe	re	(2) ro	ocks				
	(3) ammonia			itrates				
69.	Which one of the	following cannot	move f	reely in and	l out	of a capillary?		
	(1) Sugar	980	(2)	Oxygen				
	(3) Carbon dioxi	d e	(4) F	Plasma prot	ein			
(40)			12					
(40)								

70.	The size of filtration	n slits of glome	rulus are a	pproxima	itely				
	(1) 10 nm	(2) 15 nm	(3) 20 n	m	(4) 25	nm	1988		
71.	When different ger phenotype, this ph			rin a w	ay that	influences	the		
	(1) epistatic		(2) pleio	trophic					
	(3) codominance	35	(4) incom	nplete do	minant				
72.	Plasmids do which	of the following	g?						
	(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	e .		20					
73.	The most common	lethal genetic d	lisease in tl	ie United	States	is			
	(1) sickle cell disea	ise	(2) cysti	d fibrosis	ľ				
	(3) Huntington's di	scasc	(4) haen	ophilia					
74.	Longest cells in hu	man body are		65					
	(1) leg muscle celle	3	(2) bone	cells	•	35			
	(3) nerve cells	the second secon	(4) heat	muscle c	cells				
75 .	According to botan	ical nomenclaru	mhich a	re not all	lowed				
	(I) synonyms	(2) - cartony .	(3) tauto	nyms	(4) isor	nyms			
(40)		1	3		200 200	(P.T.	0.		
						[2.1	. U.j		

76.	In groundnut the root is				
	(1) epiphytic	(2)	napiform		
	(3) nodulated	(4)	photosynthetic		
77.	The cells which act as parasites in	the	body		
	(1) schwann cells	(2)	hepatocytes		
	(3) Kupffer's cells	(4)	cancer cells		
78.	Which one of the following ecosyste grassland?	ms h	ave more produ	ctivi	ty in an unit area
	(1) Grassland	(2)	Marine ecosyst	tem	
	(3) Pond ecosystem	(4)	Tree ecosystem	1	
79.	When birth-rate equals death rate				
	(1) a population grows rapidly				
	(2) density-dependant limiting factor	ors d	o not affect the	pop	oulation
	(3) a population goes through up	and o	lown cycles		
	(4) the size of a population remain	s co	nstant		
80.	Which one of the following is not	an al	piotic factor that	t sh	apes ecosystems?
	(1) Soil minerals (2) Predators	(3)	Fire	(4)	Rainfall
81.	Last stage of plant succession is				
	(1) ecotype	(2	serial commu	nity	
	(3) biotic community	. (4	ecotone		
(40)		14			

	>*		
82.	Peptone water medium is an examp	le of	
	(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		T .
	(2) nutrient agar		
	(3) nutrient broth		
	(4) MacConkey's agar		
84.	Chemical preservatives do not include	ie	
	(1) organic acids		sulphates
	(3) alcohol		starch
85.	Most current gene therapy trials tar	get:	₩ ₩
	(1) SCID deficiency	T.:	cancer
	(3) cystic fibrosis	15 Te	HIV
0.0	C. B.	(-1)	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 a	dsor	bed on the solid stationary phase?	
	(1) Enzyme (2) Antigen	(3)	Antibody (4) Both (2) and (3)	
90.	In an electron microscope higher ma	gnifi	ication is due to the use of	
	(1) higher wavelengths of light	(2)	high velocity electrons	
	(3) achromatic lenses	(4)	magnetic system	
91.		hich one of the following species of clostridium is responsible for formation our 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	h on	ne of the following?	
	(1) hepatitis	(2)	cervical cancer	
81	(3) AIDS	(4)	oral cancer	
93.	Distance between each turn of the I	ANC	helix is	
	(1) 20 Å (2) 28 Å	(3)	34 Å (4) 42 Å	
94.	Which one of the following are incap	pable	e of producing toxins in the body?	
	(1) Clostridium tetani	(2)	Human immunodeficiency virus	
	(3) Escherichia coli	(4)	Clostridium botulinum	
40)	16	,		

95.	Koch's postulates are used to relate				
	(1) a specific micro-organism to a specific disease				
	(2) spontaneous generation of micro-or	ganism to organic matter			
	(3) production of toxins to disease				
	(4) transmission of sleeping sickness to	tsetse flies			
96.	Phylogenetic tree of bacteria is constru	cted based on the sequencing of			
	(1) 18S rRNA (2	16S rRNA			
	(3) DNA (4)	All of the above			
97.	Tubulin in cilia and flagella are example	ies of			
	2550 2444 - 475000 2007 - 20050 - 41	storage proteins			
	(3) motility proteins (4)	defence proteins			
98.	Probiotics are				
3	(1) cancer inducing microbes (2)	kind of food allergens			
	(3) live microbial food supplement (4)	safe antibiotics			
99.	The polysaccharide used to solidify bac	terial growth medis is			
	(1) gelatin (2) agar (3)	starch (4) All of the above			
100.	Micro-organisms that survive in the abs				
		metabolize glucose			
	(3) have no cell membranes (4)	produce spores			
(40)	17				
		. (P.T.O.)			

	•••				
101.	Murein is a				
	(1) polypeptide	3	(2)	peptidoglycan	
	(3) polysaccharide	•	(4)	lipid	
102.	Most case of teta	anus are due			
	(1) deep wounds		(2)	respiratory dro	plets
	(3) bites arthropo	ds	(4)	consuming unj	pasteurized
103.	The noncoding RI	NA include		äi	
	(1) rRNA		(2)	tRNA	
	(3) mRNA		(4)	Both rRNA and	i tRNA
104.	Tetracyclines are	antibiotics that pre	ven	ι the synthesis	of
	(1) cell wall		(2)	nucleic acid	
	(3) protein ,		(4)	cytoplasmic me	embrane
105.	What is the mean	number of bases	per	twist in zDNA?	
	(1) 10	(2) 9	(3)	11	(4) 12
106.	Which among the	se is not a mycoto	xin?) (2)	
	(1) Aflatoxin	(2) Patulin	(3)	Ochratoxin	(4) d-Toxin
107.	. Metal that is used as a catalyst in hydrogenation of oils is				
	(1) Ni	(2) Pb	(3)	Zn	(4) Cd

108.	PS I and PS II absorb light of differ	rent wavelengths	iue to			
	(1) the presence of different soluble electron carriers					
	(2) different locations is the chlorop	85 85				
	Section 19 and 1	National Control of the Control of t	chlorophyil			
	(3) the proteins associated with each					
	(4) different types of reaction centr	e chlorophylis in e	each photosystem			
109.		n radioimmunoass	say 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 rel	lated with				
	(1) Hebert Boyer	(2) Charles Dar	win			
	(3) Stanley Cohen	(4) Both (1) and	1 (3)			
112.	The purpose of cloning is					
	(1) replacing original genotype					
	(2) preserving genotype	9 9 9 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
	(3) production of hGH gene in E. o	coli				
	(4) None of the above	:W	** _*			
113.	Golgi bodies originate from					
	(1) plasma membrane	(2) mitochondria	a.			
	(3) endoplasmic reticulum	(4) sytoplasm				
114.	The term 'Ecology' was first coined	by				
	(1) Elements (2) Reiter	(3) Tansley	(4) Odum			
40)	19	,	, , oddii			
X 38			(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 en	ergy				
	(4) flow of both materials and energ	y				
116.	Which is not an example of cytoplas	mic inheritance?				
	(1) Plastid inheritance	(2) Kappa partic	cle inheritance			
	(3) Sigma particle inheritance	(4) Female steri	lity in maize			
117.	When a gene exist in more than one	form the differe	ent terms are called			
	(1) heterozygous	(2) complementa	ary gene			
	(3) genotype	(4) alleles				
118.	Fungi have been defined as chloropl	nyll (-) less non-v	vascular plants by			
	(1) Mundkur (2) Alexopoulos	(3) Bessey	(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				

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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)

- 1. 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 पृष्ट 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।
- 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 दें कि एक बार स्याही 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।
- परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमित 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।