Mre im Applied Microbialogy us

15P/292/23

Question Booklet No., 13//

(To be filled up by the candidate by blue/black ball-point pen)

(Use only blue/black ball-point pen in the space above and on both sides of the random of blue,

- 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
  Question Booklet bring it to the notice of the Superintendent/Invigilators imm
  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).
- 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 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 candidat form of unfair means, he/she shall be liable to such punishment and impose on him/her.

। उपर्युक्त निर्देश हिन्दी में :

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[No. of Printed Pages: 28+2]

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

Time/समय : 21/2 Hours/घण्टे

Full Marks/पूर्णांक : 450

Note: (1) Attemp

- (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.

  अधिकाधिक प्रश्नों को हल करने का प्रयत्न करें। प्रत्येक प्रश्न 3 अंक का है। प्रत्येक गलत उत्तर के लिए एक अंक काटा जाएगा। 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. 5-bromouracil acts as a mutagen by pairing with
  - (1) adenine
- (2) guanine
- (3) cytosine
- (4) thymine
- 2. An organism capable of carrying out butanol fermentation is
  - (1) Zymomonas

- (2) Clostridium butyricum
- (3) Clostridium acetobutylicum
- (4) Enterobacter

(P.T.O.)

5	Live vaccines a	re available agains (2) <b>Measies</b>	t the followi	(4) Polio
6.	<ul> <li>Antigenic variat</li> </ul>	ion is most extens	ive in	
	(1) Influenza viru (3) Measies viru	rus	(2) Smallpox vi (4) Herpes virus	•
7.		lowing is not a DN		
	(1) SV40	(2) T4 phage	(3) TMV	(4) Adenovirus
8,	During meiosis,	crossing-over most	ly occurs during	
	(1) prophase I	(2) prophase ii	(3) anaphase I	(4) Telophase II
9.	Human papillome	virus causes whi	ch of the following	<b>?</b>
	(1) Hepatitis	•	(2) Cervical cane	
	(3) AIDS		(4) Oral cancer	
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	(1) haptens	(2) carriers	(3)	antigens	(4)	antibodies
12.	Which of the follo	wing has a ds DN	A ge	nome?		
	(1) CaMV	(2) CMV	(3)	Viroid	(4)	TLCV
13.	Ergot discase is	aused by				•
	(1) Claviceps	(2) Rhizopus	(3)	Puccinia	(4)	Mucor
14.	The PMF drives presynthesize ATP in	rotons across micro n a process known	obial as	membranes, s	nd th	e energy is used to
	(1) chemiosmosis	1	(2)	photosynthe	sis .	•
	(3) respiration		(4)	chemolithotr	ophy	
15.	All of the following	ng apply to bacter	ial p	asmids, excep	t	
	(1) they are self-	replicating loops of	of DN	iA.		
	(2) they have 10	-50 genes				, ·
	(3) they are requ	rired in bacterial o	onju	gation		
	(4) they are esse	ential for survival	of th	e organism		
/ <b>990</b> \			3			(P.T.O.)

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	(4) the virus fails to replicate in the bacterial cell
17.	UV light causes mutation in bacteria by
	(1) causing frame-shift
	(2) causing inversion
	(3) causing dimerization of adjacent thymine residues
	(4) causing transition
18,	All except the following is true for Agrobacterium tumefaciens
	(1) it carries the Ti plasmid
	(2) it carries oncogenes on its plasmid
	(3) it causes crown gall disease
	(4) it is a Gram-positive bacterium
19.	The capsular material produced by bacteria generally consists of
	(1) lipids (2) polysaccharides
	(3) fatty acids (4) nucleic acids
(332)	<b>.</b>

•	(1) bacteria	(2) fungi	(3) algae	(4) viruses	
2.	The enzyme that replication is a	relaxes supercoil	ing ahead of the re	plication for	
	(1) methylase	(2) DNA gyrase	e (3) primase	(4) transposas	ie .
3.	The metal used	to recover copper	from a solution o	f copper sulphate	is
	(1) Fe	(2) Hg	(3) Ag	(4) Mn	:
14.	Hap70 is a			• • • • • • • • • • • • • • • • • • • •	
	(1) heat shock	protein			
		heat stressed E	coli		b.
		e denatured prot			
	(4) All of the a				
25.	Endospore form	nation in <i>Bacillus</i>	is triggered by		
	(1) starvation				•
•	(2) desiccation				-
	(3) growth inhi	bitory temperatur	'ca		
	(4) All of the a	bove			
<b>332</b> )			5 .	•	(P.T.O.

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	(7) it mas an (7)	u, approximately	109 kDa	
27	. A compound li	ght microscope o	annot resolve stru	ctures amaner man
	(1) 10 μm	(2) 5 μm	(3) 2 μm	(4) 0·2 μm
28.	An envelope is		ain viruses when	
		ost cell nucleus		
	(2) migrate to			•
	(3) assemble in			
		the host cell m	embrane	
29.			mplate using the f	ollowing engume
	(1) RNA polyme	rase	(2) Primase	
	(3) Reverse tran	scriptase	(4) Helicase	•
30.	Which of the fol	lowing are incape	able of producing	toxins in the body?
	(1) Clostridium t	etani		towns in the body?
	(2) Human imm	unodeficiency vin		
	(3) Escherichia c		ug.	
	(4) Clostridium b	otulinum		,

6

32.	All of the lollowing represent more spec	****** *******************************	
	(1) IgG production	•	
	(2) production of mucus by the linit	ng of the respiratory tract	
	(3) production of acid in the stomac	:h	
	(4) phagocytosis by macrophages		
33.	A visible clumping of particles occur	rs to the observer in	
	(1) ELISA	(2) Agglutination test	
	(3) Precipitation test	(4) Radioimmunoassay	
34.	Complex I of the electron transport	chain is called	
	(1) succinate/coq oxidoreductase	(2) cytochrome c oxidase	
	(3) ubiquinone	(4) NADH/co oxidoreductase	
35.	Antibiotics are largely produced by	bacteria during	
	(1) lag phase	(2) log phase	
	(3) stationary phase	(4) decline phase	
(222)	,	· 7	(P.T.O.)

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	(1) a specific micro-o	rganism to a	spec	ific dia	·
	(2) spontaneous gene				anic matter
	(3) production of toxi			·	
	(4) transmission of sid	ceping sickne	:88 to	tactae flies	
38.	The number of moles	of solute pre	sent	in one Kg of	8 Solvent is called
	(1) normality			molality	- Joseph John Commed
	(3) molarity		(4)	None of the	above
3 <del>9</del> .	The transfer of RNA ont	to a nitrocellui	lose r	nembrane and	l its detection is now of
	(I) Southern blotting	•		Northern blo	
	(3) Western blotting			South-Wester	_
40.	E. coli chromosome con	ntains approx			
-	(1) 500 ORFs (2)				(4) 8000 ORFs
41.	What is the concentration	on of H <sup>+</sup> in a s			
		0 <sup>-12</sup> M		10 <sup>-13</sup> M	(4) 10 <sup>-14</sup> M
(332)		8			

	(4) rod shaped encapsulated cells		
<b>43</b> .	Phylogenetic tree of bacteria is co	nstructed based on the sequencing	OI
	(1) 18S rRNA	(2) 16S rRNA	
,	(3) DNA	(4) All of the above	• .
44.	Pasteurization involves treatment	with	
	(1) low temperature	(2) steaming	
	(3) high temperature	(4) low and high temperatures	
45.	Common food poisoning microbes	are	
	(1) Clostridium and Salmonella	(2) Clostridium and E. coli	
	(3) E. coli and Salmonella	(4) Clostridium and Rhizobium	
46.	The Pine seedlings grow best in	soils with	
	(1) VAM	(2) Ectotrophic mycorrhiza	
	(3) Arbutoid mycorrhiza	(4) Ericoid mycorrhiza	
332)	•	9	(P.T.O.

	(1) is essentially a saprophyte bu	t can also live as a parasite
	(2) always lives as a parasite	
	(3) never causes disease in a hos	t
	(4) can only live as a saprophyte	•
49.	A clear area in the lawn of growing infection is called	bacterial cells initiated upon bacteriophage
	(1) inhibition zone	(2) plaque
	(3) halo	(4) colony forming unit
50.	Water	
	(1) can give up an H+, becoming (	он-
	(2) can accept an H <sup>+</sup> , becoming H	30⁺
	(3) can form hydrogen bonds	•
	(4) All of the above	
51.	SARS involves infection of the	
	(1) gastrointestinal tract	(2) urinary tract
	(3) respiratory tract	
(332)	10	(4) genitourinary tract
	11	• ·

	(4) at a site other	r than the activ	site in a nonco	impetitive manner	
<b>53.</b>	When four different structure formed	ent groups are is a	ttached to a te	trahedral carpon atom	, မાင
	(1) isomer		(2) stereoiso	mer	
	(3) simple hydrox	carbon	(4) amphipa	thic molecule	
<b>54</b> .	Tubulin in Cilia	and Flagelia are	examples of		
	(1) hormonal pro	teins	(2) storage	proteins	
	(3) motility prote	ins	(4) defence	proteins	-
55.	Hydrogen bonds	cannot form be	veen	•	
	(1) water and gh	10086	(2) water ar	nd water	
	(3) water and ph	osphate	(4) phospha	ite and octane	
<b>56.</b>	If a length of DI B-DNA take?	NA has 45000	ase pairs, how	many complete turns	will a
	(1) 45	(2) 450	(3) 4500	(4) 45000	
(332)			11	(2	P.T.O.)
(444)					

58.	Gram staining is a technique to	used for differentiating bacterial cells on the b	asis
	(1) reproduction	(2) inclusions	
	(3) cell wall composition	(4) flagellation	
<b>59</b> .	The lac operon is		
	(1) under the control of catal	polite repression	
	(2) under the control of its o	wn specific negative regulatory system	
	(3) Both positively and negati		
	(4) All are correct		
60.	Which of the following is normal secreting a desired monoclone	illy associated with the production of hybridon	nas
	(1) Blockage of the nucleotide	salvage pathway by aminopterin	
	(2) Mitogen-induced antibody	•	
	(3) Mycloma cells producing a		
	(4) None of the above		
(332)		12	

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	(1) 62·9 °C for 30	minutes	(2)	THO TO TOP	10 SECOURS	
	(3) 71.6 °C for 30	minutes	(4)	82 °C for 3	•	
63.	Strictly anaerobic, fixation are	anoxygenic phot	totropi	hs that use	the Calvin cycle	for CO <sub>2</sub>
	(1) nitrifying bacte	eria	(2)	green sulph	ur bacteria	
	(3) purple sulphu	r bacteria	(4)	sulfur oxidi	zing bacteria	
64.	The toxin produce	d by Bacillus tha	ıringie	nsis is		
	(1) a lipid with in	secticidal proper	ties			
	(2) a protein with	insecticidal prop	erties	•		
	(3) a lipid with at	ttiviral properties	•			
	(4) a sugar with i	nsecticidal prope	rties			
65.	One of the major	reasons for apop	tosis	is		
	(1) lack of polyme	rase	(2)	activity of	endonucleases	
	(3) activity of mit	ochondria	(4)	reduced for	od intake	•
66.	Phytoplanktons at	e dominant in w	hich (	of the follow	ing zones?	
	(1) Limnetic	(2) Profundal	(3)	Littoral	(4) Benthic	
332)		- 1	13			(P.T.O.)

	(4) safe antibi	otics			
68.	•		ında would have ti	he highest boiling	noint3
	(1) CH <sub>3</sub> CH <sub>2</sub> CH		(2) CH <sub>3</sub> NH <sub>2</sub>		Ponte
	(3) CH <sub>3</sub> OH		(4) CH <sub>2</sub> F <sub>2</sub>		
69.	Number of pro	tofilaments in a	microtubule is		
	(1) 5	(2) 10	(3) 12	(4) 13	
70.	P <sub>870</sub> reaction c	entre is associat	ed with the photo:	synthetic machiner	y in
	(1) cyanobacte		(2) purple b		•
	(3) green bacte	eria .	(4) algae		
71.	Enzymes that acceptor are ca	catalyze the tra	nsier of a phosph	oryl group from A	TP to an
	(1) kinases	•	(2) hydrolas	cs .	
	(3) mutases		(4) oxido-red	iuctases	
(332)			14		

ga ali<sup>sa ar</sup>

	• •		
73.	Direct microscopic counts can b of all of the following, except	e used to determine th	min a namulatian
	(1) virus (2) bacteria	(3) protozoa	(4) fungi
74.	The polysaccharide used to sol	idify bacterial growth	media is
	(1) Gelatin	(2) <b>Agar</b>	
	(3) Starch	(4) All of the al	oove
75.	Micro-organisms that survive is	n the absence of mois	ture do so because
	(1) they produce flagella	(2) metabolize g	glucose
	(3) have no cell membranes	(4) produce spo	res
<b>.76</b> .	Two components of the cell me	mbrane in prokaryote	s are
	(1) DNA and RNA	(2) ATP and lip	ids
	(3) lipids and DNA	(4) lipids and p	roteins
77.	Organic molecules functioning	as coenzymes/cofactor	rs of enzymes are
	(1) ubiquinone and cytochrome	es (2) NAD and FA	AD.
	(3) ATP and ADP	(4) glucose and	pyruvate
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	(3) polysaccharide	(4) lipid
80.	Central dogma of genetic inform	mation has been modified by the discovery of
	(1) reverse transcriptase	(2) DNA polymerase
	(3) restriction endonuclease	(4) RNA polymerase
81.	Electron from Cyt C are carried	d to molecular O <sub>2</sub> in
	(1) fermentation	(2) aerobic respiration
	(3) anaerobic respiration	(4) denitrification
82.	A sexually transmitted disease genitals is caused by	showing development of a chancre on the
	(1) Neisseria gonorrhoeae	
	(2) Treponema pallidium	
	(3) Hepatitis B virus	• •
	(4) human immunodeficiency vi	irus
(332)		16

	(1) Xanthomonas campestris	(2) Bacillus thuring	,
	(3) Trichoderma harzianum	(4) Nuclear polyhedrosis virus	
<b>15.</b>	When the F-factor is transferred receiving bacterium	to a bacterium during conjugation, the	e
	(1) becomes resistant	(2) acquires a capsule	
	(3) converts to donor bacterium	(4) dies	
<b>36</b> .	Most cases of tetanus are due		
	(1) deep wounds	(2) respiratory droplets	
	(3) bites of arthropods	(4) consuming unpasteurized milk	
<b>57</b> .	Immunization with Sabin vaccine is	is to protect against	
•	(1) HIV (2) Tuberculosis	s (3) Polio (4) Hepatitis	
3 <b>8</b> .	The noncoding RNA include		
	(1) rRNA	(2) tRNA	
	(3) mRNA	(4) Both rRNA and tRNA	
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	-	gr = - more a series - que a
	(1) antibiotic production	(2) Sauer modulation
	(3) alcohol production	(4) citric acid production
91.	Tetracyclines are antibiotics that	prevent the synthesis of
	(1) cell wall	(2) nucleic acid
	(3) protein	(4) cytoplasmic membrane
92.	Nitrogenase is an enzyme that re	gulates
	(1) nitrogen fixation	(2) nitrification
-	(3) nitrate dissimilation	(4) denitrification
93.	A mutation in which one amino	acid is substituted for another is called
	(1) deletion	(2) frame-shift mutation
	(3) nonsense mutation	(4) missense mutation
94.	Both DNA and RNA absorb maxis	maily at
	(1) 210 nm (2) 280 nm	(3) 300 nm (4) 260 nm
(332)		
,— <del>~—</del> ,		18

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	(3) competition	(4) predation
97.	Zoogloeas are	
	(1) viruses (2) bacteria	(3) nematode (4) algae
98.	Prochloron is an oxygenic phototropl	h which contains
	(1) Chlorophyill a	(2) Chlorophyll b
	(3) Both Chlorophyll a and b	(4) Phycobilins
99.	In the ocean, spiralling surface currer micro-organisms are called	nts that concentrate nutrients, wastes and
	(1) geothermal vents	(2) gyres
	(3) red tides	(4) photic zone
٠٥٥.	What is the mean number of bases	per twist in Z-DNA?
	(1) 10 (2) 9	(3) 11 (4) 12
l <b>01</b> .	Hartig net is associated with, select	the most appropriate one
	(1) Ectotrophic mycorrhiza	(2) Endotrophic mycorrhiza
	(3) Ectoendotrophic mycorrhiza	(4) Basidiomycetes
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	v r ≃ yesp ear	(3) 3	(4) 4	
104.	Which among these is no	t a mycotoxin?		
	(1) Aflatoxin	(2) Patulir	1	
	(3) Ochratoxin	(4) 8-toxin		
105.	Acetic acid, lactic acid, at significant amounts durin	uccinic acid, ethanol, e	CO <sub>2</sub> and H <sub>2</sub> are produ	uced i
	(1) mixed-acid fermentation	on (2) butane	diol fermentation	
	(3) alcoholic fermentation		cid fermentation	
106,	The number of pathogens to of host is	hat either kill or infect	50% of an experimenta	l grou
	(1) ID <sub>50</sub>	(2) D value	;	
	(3) LD	(4) None of	f the above	
107.	Which of the following star	tements is untrue for	the endatorings	
	(1) They are secreted by ti	he bacterial cattle	are citationing,	
	(2) They are generally proc	liced by Grow ware!	1	7
	(3) They are heat stable	saced by Grant negati	ve bacteria	
	(4) They are weakly immus	nogenia		
(000)	The state of the s			
(332)		20		

	(3) trai	nsduction		(4)	All of the	e abov	re .	
110.	The dr	ug AZŢ, effe	ctive against HIV,	is				
	(1) DN	A polymeras	e					
	(2) rev	erae transcr	iptase inhibitor					
	(3) RN	A polymeras	e ·					
	(4) pro	tease inhibi	tor					
111.	Mctal	that is used	as a catalyst in	hydr	ogenation	of oi	ls is	
	(1) Ni		(2) Pb	(3)	Zn		(4) Cd	
112.	Nod fa	ctors						
	(1) he	p in the for	mation of nodule					
	(2) inc	luce root ha	ir curling				•	
	(3) tri	ger plant c	ell division					
	(4) do	all of the a	bove					
(332)				1				(P.T.O.)

(1) conjugation

(2) transformation

	(3) capacity of as DNA to hybridiz specimens	e with a protein sequence present in test
	(4) capacity of ds DNA to hybridiz specimens	e with a protein sequence present in test
114.	Coliform bacteria are	
	(1) Gram negative	(2) non-spore forming
	(3) rod shaped	(4) All of the above
115.	In the lac operon, the enzyme pern	nease is coded by
	(1) lac Z (2) lac Y	(3) lac A (4) lac i
116.	Regulation of gene expression by at	tenuation is a feature seen in
	(1) trp operon (2) his operon	(3) ara operon (4) lac operon
117.	Class II MHC are expressed on	· ·
	(1) β-cells	(2) macrophages
	(3) dendritic cells	(4) All of the above
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	the other is		-			
	(1) Arginine		(2) Aspartic ac	a		
	(3) Threonine		(4) Tryptophan			
1 <b>30</b> .	During DNA repi	lication in bacteri	a, Single Stranded	Binding (SSB) protein	ns	
	(1) monomers	(2) dimers	(3) trimers	(4) tetramers		
121.	The first algal vi	rus among the ge	nera cyanobacteria	was named	•	
-	(1) LPP-4	(2) LPP-8	(3) LPP-6	(4) LPP-1		
122.	RecA, an enzyme as a	required during r	ecombination in b	acteria, can also functio	on	
	(1) integrase	(2) protease	(3) galactosidas	se (4) exonuclease		
123.	Tumour formation	n in cancer is an	outcome of			
	(1) transformation	on of a cell				
	(2) immortalization of a cell					
	(3) transformation	on and immortaliz	ation of a cell			
	(4) None of the	above				
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	99 ml of was	sample quuuon of t ter to give a dilutio	i:100, 1 miles trans on of	terred to a flask cont	aining	
	(1) 10 <sup>-2</sup>	(2) 10 <sup>-3</sup>	(3) 10-4	<del>(4)</del> 10~		
126.	Pyruvate deh	ydrogenase in the	mitochondrial mat	rix converts		
	(1) glucose i	nto glucose-6-phos	phate	,		
	(2) glyceralde	hydes-3-phosphate	to pyruvate			
	(3) reduction of FAD to FADH <sub>2</sub>					
	(4) pyruvate	into acetyl CoA an	d CO <sub>2</sub>			
127.	$\mathrm{CO}_2$ is assimilated by phosphoenolpyruvate carboxylase in mesophyll cells forming oxaloacetate in					
	(1) C <sub>3</sub> pathw	ay	(2) photoresp	iration		
	(3) fermentat	ion	(4) C <sub>4</sub> pathw	ay		
128.	PS I and PS	II absorb light of o	lifferent wavelength	due to		
	(1) the presence of different soluble electron carriers					
	(2) different locations in the chloroplast					
	,		each reaction cen	er chlorophyll		
				n each photosystem		
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	ting. The theoreses?	etica	d possibility of	this	site repeating	itseli	f is after h	ow many
(1)	64	(2)	256	(3)	1064	.(4)	32	
	erophores are ounts	pro	duced by bact	eria	only when	the f	ollowing is	in low
(1)	Cu	(2)	Fe	(3)	Zn	(4)	Mn	
A s	eries of operon	s co	ontroll <b>ed</b> as a u	ınit	constitute a		-	
(1)	Regulon	(2)	Cistron	(3)	Codon	(4)	Riboswito	:h
An	basic icosahed	ron	is a symmetric	: str	ucture contai	ining		
(1 <u>j</u>	18 faces and	8 ve	rtices	(2)	20 faces and	12 v	ertices	
{3}	28 faces and	16 v	ertices	(4)	32 faces and	20 1	ertices	•'
Аc	ommon isotope	of	iodine used in	radi	ioimmunoassa	ay is		
(1)	<sup>100</sup> [	(2)	125]	(3)	150 [	(4)	175 <sub>[</sub>	
			25				• •	(P.T.O.)

131.

132.

133,

134.

(332)

	replication is a	, •			-		
	(1) methylase	(2) DNA gyrase	(3)	primase			
137.	Characteristic feature(s) of adaptive immunity is						
	(1) antigen apeci	ificity	(2)	self-nonself	recognition		
	(3) immunologic	memory	(4)	All of the a	bove		
138.	The most abundant rare gas in the atmosphere is						
	(1) Xe	(2) Ar	(3)	Не	(4) Ne		
139.	Lipoproteins, glycoproteins, flavoproteins are all examples of						
	(1) peptides		(2)	prosthetic g	roups		
	(3) conjugated p	roteins	(4)	metalloprote	eins		
140.	Fungi differ from algae in being						
	(1) achierophyllous and autotrophic						
	(2) chlorophyllous and autotrophic						
	(3) chlorophylious and saprophytic						
	(4) achlorophyllous and heterotrophic						
(332)		20	6				

	(4) multiplicity of	f the genetic code	<b>e</b>	٠,	• •		
142.	The bacteria causing anthrax was discovered by						
	(1) Koch	(2) Pasteur	(3)	Fleming	(4) Jenner		
143.	Immunologically membrane recep	active region of a tors on lymphocy	n imm tes are	unogen tha	t bind to antiger	specific	
	(1) epitopes	(2) paratopes	(3)	CDRs	(4) TLRs		
144.	Reactions involving transfer of electrons are catalyzed by						
	(1) hydrolases	•	(2)	lyases			
	(3) transferases	·	(4)	oxido-redu	ctases		
145.	The group firms	cutes includes bac	cterial	species whi	ch arc		
	(1) Gram +ve	·	(2)	Gram -ve			
	(3) acid fast		(4)	None of th	e above		
(332)			27			(P.T.O.)	
		•			-		

	(4) None of the above						
147.	Cyanophages were discovered by						
	(1) F. W. Twort and F. d'Herelle	(2) Safferman aı	nd Morris				
	(3) Robert Koch	(4) Benda					
148.	Number of moles of CO2 in 16 g o.	fO <sub>2</sub> is					
	(1) 0·1 mole (2) 0·2 mole		(4) 0·5 mole				
149,	Two enzymes which are unique to						
	(1) isocitrate lyase and malate synt						
	(2) malate dehydrogenase and isoci						
	(3) malate synthase and malate dehydrogenase						
	(4) malate synthase and citrate synthase						
150.	CAP, the Catabolic Activator Protein	, has a role in the	expression of the				
	14 L F	(3) ara operoh	(4) his operon				
	**:	•					
	28	. •	D/5( <b>332</b> )2300				
			-				

## अभ्यर्थियों के लिए निर्देश

- 🚁 १९१६) १५११ र *१९१६) प्रत्याचा प्रकृत अपराच्चा का कार्याच्छ,* १९७८। या सादा काङ्ग मा खुला कार्यक साद्य मा न लाया
- 3. उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूस ें पत्र का ही मूल्यांकन किया जायेगा।
- 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 गाक्षा कर दें। जडौं-जडौं आवश्यक हो वहाँ प्रश्न-पुस्तिक। का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
- 6. औ॰ एम॰ आर॰ पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक सं॰ और औ॰ एम॰ आर॰ पत्र सं॰ की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
- 7. डपर्युक्त 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-यत्र की सम्बन्धित पंक्ति के सामने दिये गये वृक्त को उत्तर-यत्र के प्रथम पृष्ठ पर दिये गये निर्देशों 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 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 खालों छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
- एक कार्य के लिये प्रश्न-पुस्तिका के मुखपृष्ठ के अन्दर वाले पृष्ठ तथा ॲतिम 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 की त साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होग