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SOTATI VENS

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2024

BIOLOGY

(Theory)

Full Marks: 70

Pass Marks: 21

Time: Three hours

All the questions are compulsory.

The figures in the right margin indicate full marks for the questions.

For Question Nos. 1 to 7, select most appropriate one from the given alternatives A, B, C and D and rewrite the same.

1.	Entr	y of pollen tube through micropyle is called –	A OF ROLAS	1
	A.	Mesogamy	Probe	M.
	B.	Pseudogamy	vector	В
	C.	Chalazogamy	Clone is but	
Case	D.	Porogamy Le light of the first discovered of Restriction Land	Plasmid Tuoning	.d
2.		ng protein synthesis, peptide bonds are formed at the -	7	1
	A .	Nucleus	Diosid	1
	B.	Nucleolus	Bco R H	a s
	C.	Ribosomes	Don't	
	D.	Lysosomes	H kaik.	6. Q

3.	Wh	ich of the following Nonsense codon is called 'ochre'?
	A	AUG
	B.	UAG
	C.	UAA
	D.	UGA
4.	Sho	on lived immunity acquired from mother across placenta is categorized as _
	A.	Active immunity
	B.	Passive immunity
	C.	Innate non-specific immunity
	D.	Cellular immunity
5.	DN	A or RNA segment tagged with radioactive molecule is called —
	A	Probe
	B.	Vector
	C.	Clone
	D.	Plasmid
6.	Wh	ich among the following is the first discovered of Restriction Endonuclease?
		the many has a programme property and the
	A.	Eco RI
	B.	Eco RII
	C.	Hind I
	D,	Hind []
2Bi	o (T)	18/24 2 Contd.

7.	AN THE RELATIONS OF THE PARTY O	lowing ecologists who stated that increased diver	sity
	contributed to higher p	productivity –	1
Anch	a langer and the translated	Alexand Through remains route pest 5 of 81 way, arrives	WO I
	A Paul Ehrlich		
1	Contra acounty in policy of	Nan a tha pairs of an angroussymmittens in which	21
	B. David Tilman	Remain gametophyre takes place.	
	C Pobort May	i Vifferentiate between tube, convenied vascetonay by	4 7
	D. Georgy Gause		
" world	and the support of	reshive the company of the first part of the same of the same	186-71
٤	Question Nos.8 to 17 o	are very short type questions carrying 1 mark each.	
8. 10 14	Name one disorder the	at can be detected by amniocentesis.	1
9.	Distinguish between t	true fruits and false fruits by giving one point.	1
10.	State the utility of bac	ck cross.	.1. T
11.	Why is Y chromosom	ne referred to as genetically inert?	4.1
12.	Law of dominance is	not universally applicable. Give reason. as 2005 wold	.21
13.	Why is mortality of a	nimals increase at sewage discharge points?	, AL
14.	Why is colostrum ver	ry much essential for new born infants?	1
15.		provide innate immunity to other uninfected cells. Ana	lyse.
		the translation of the safety of the property to the contribution of the safety of t	1
S.		Why de we conserve wildlife? Give may noishly	16.
16.		oresis DNA fragments move towards the anode instead	ad of
.	the cathode. Give rea	ison. There are estimated in a collapse of a soul The	1
2 E	Bio (T) 18/24	3	T.O. 1
		그리고 생겼다면 가지 않아 있다는 사람들이 되는 바람들이 하는 것이 되었다면 하는 것이 되었다.	The state of the s

1/	What is 'The Evil Quartet' in biodiversity loses?	1
T.		
Qui	estion Nos. 18 to 27 are short answer type-11 questions carrying 2 marks ed	ich.
18.	Name the parts of an angiosperm flower in which the development of male	and
	female gametophyte takes place.	2
19.	Differentiate between tubectomy and vasectomy by giving two points.	2
20.	"Flowering plants have developed many devices to prevent self-pollination	on".
	Analyse with suitable reasons.	2
21.	How does the study of comparative anatomy provide evidence in favour	- 45
į.	evolution? Support your answer with two points.	2
22.	Explain by giving two points the role of Integrated pest Management program	me.
-	Strong vikening an arthered to the common of a state	2
23.	How does spleen act as lymphoid organ? Give two points.	2
24.	Differentiate between sticky end and blunt end of DNA in two points.	2
25.	Human insulin when initially synthesized in human body needs to be proces	sed
() ()	before it can act. Explain.	2
26.	Why do we conserve wildlife? Give two points.	2
	Dec ay of each me been the happened and property and the maken a	
27.	"There are certain limitations of ecological pyramids". Give reason,	2
Bic	O(T) 18/24 4 Con	td.

Qu	estion Nos. 28 to 33 are short answer type-I questions carrying 3 marks eac	h.
28.	Explain aminoacylation of the tRNA.	3
	mindra so calcipio il contino nuno enganicio escribirmicardi de motto.	
	majors remarkables of temperature of the stronger a periodical research of the second	
	Why is RNA considered as the first genetic material? Explain.	3
29.	A DNA segment has a total of 1000 nucleotides, out of which 240 of them	are
	adenine containing nucleotides. How many pyrimidine bases this DNA segment	ent
	possesses ?	3
	And a showing a record the following and the control of the contro	843
ž.	OR	
	If the gene frequency of a recessive allele t is 0.2, find out the percentage	of
	individuals with genotype TT, Tt and tt in the population.	3
30.	The first of the best of the next of the contract of the contr	ıts.
Ī	le bes premary pacetices and supplied by parametric life in the life in the least of the least o	3
	Augus shound agaington confirm on OR cause to mother to not not be selected.	
7	Elucidate the process of replication of a retrovirus after it gains entry into hum	an
	body.	3
M		
31.		
	unce points.	3
	OR STREET	
		** 14
2 B	io (T) 18/24 5	Ο.

desi	"Determination of BOD can help in suggesting the quality of water body". Justif	îy.
100	Formarky works were about the contraction of the co	3
20		
32.	Although biotechnology promotes human welfare, it can also be misused	
	increase human suffering. Comment on the statement by giving three points.	3
	matro e secono e mai or medicante d ensh er con la	
515 (Genetically Modified plants have been useful in many ways. Give suitable reason	ns.
1875 45	epos A SC entrepante e deles una sona de la campación de relativa e la contractiva de la contractiva del la contractiva del la contractiva de la contractiva de la contractiva del la contractiva de la contractiva del la	3
.()	parties of the Marian and State of the Control of t	
33.	Draw a neat diagram of declining age pyramid and label the pre-reproductive a	nd
	reproductive age group.	3
lo a	entering on the best project and the personal on the personal of the personal	
.end.	Draw a neat diagram of inverted pyramid of biomass of aquatic ecosystem a	nd
	label primary producer and secondary consumer.	3
i v	Question Nos. 34 to 36 are Essay type questions carrying 5 marks each.	
34	Enumerate five adaptive floral characteristics of insect pollinated flowers.	5
S. Vall	OR	
71 141	hus , การทาง รายที่ตารการ อยู่ให้เรียงเป็นที่ ที่การที่ Coats แบ <mark>้ไหล้มผู้เปรี่ย</mark> บอกประกั <mark>ฐสาร</mark> (Co	11
	Trace the various phases of menstrual cycle emphasizing the role of hormones	in
	human female.	5
2 Bio	o (T) 18/24 . 6 . Conf	td.

35.	Demonstrate in five points the goals of Human Genome project.	5
	OR	
	"DNA polymorphism is the basis of DNA fingerprinting technique". Ana	ilyse.
		5
36.	Why is India considered as a mega biodiversity hotspot? Explain the biod	liversity
	hotspots of India with their location.	. 5
	OR	
	Explain with illustrations the different population interactions and give ex	amples
		5