Sample Paper (B)

Class12 Biology

a) Population genetics

General instructions					
All questions are compulsory					
The question paper has five sections a	nd 35 questions .				
All questions are compulsory					
Section A has 18 questions of one mar	k each				
Section B has 7 questions of 2 marks e					
Section C has 5 questions of 3 marks e					
Section D has two case study based qu					
Section E has three questions of 5 mar					
•					
	ternal choice have been provided in some				
questions student has to attempt only					
Wherever necessary draw properly lab					
Sect	ion A				
1. Triploid tissue in angiosperms is :					
a) Nucellus	b) Endosperm				
c)Endothecium d) Tapetum					
2. Pollen grains are well preserved as f					
a) Sporopollenin	b) Cellulose				
c) Lignocellulose	d) Pecto-Cellulose				
-	ecretion from the beginning of menstruation cycle is				
a) FSH ,Progesterone, Estrogen	b) Estrogen, FSH, Progesterone				
c) FSH, Estrogen, Progesterone 4. The mode of action of the copper io	d) Estrogen, Progesterone ,FSH				
a) Increase the movement of sperms	b) Decrease the movement of sperms				
c) Make the uterus unsuitable for imp					
5. The term Nuclein for genetic materi					
a) Mendel	b) Franklin				
c) Meischer	d) Chargaff				
	n on one of her "X" chromosomes. This chromosomes can be				
Inherited by:					
a) Only sons	b) Only grand children				
c) Only daughter	daughter d) Both sons and daughters				
7. The DNA finger printing pattern of c	hild is:				
a)Exactly similar to both of the parents	·				
c) 100% similar to the mother's DNA p	·				
_	h an individual has an overall masculine development				
gynecomastia and is sterile?					
a)Tuner's syndrome	b) Klinefelter's syndrome				
Edward syndrome d) Down's syndrome					
9. Which type of selection is observed					
a) Stabilising	b) Directional				
c) Disruptive 10. $(p+q)^2=p^2+2pq+q^2=1$ Represents ar	d) Artificial				
TO (had) -h ashdad -T vehieselles gi	i Equation useu III.				

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b) Mendelian genetics

c) Biometrics		d) Molecular genetics				
11. Earthworm is a:						
a) Herbivore		b) Secondary consumer				
c) Tertiary consumer		•	etrivore			
12. Secondary metabo	lites such as nic	otine strychnine	e and caffeine are p	produced by plants for their		
a)Nutritine value	b) Growth response					
c) Defence action	d) Effect on reproduction					
13. The relationship w	nen one species	s is harmed and	other remain unaf	fected .		
a) Amensalism		b) Predation				
c) Symbiosis	d) Parasitism					
14is not gener	ally seen in bio	diversity hotspo	ts.			
a) Endemism	b) Species ricl	hness				
c) Loss of diversity	d) Lesser interspecific competition					
Assertion-Reason type	questions:					
These question consist	s of two statem	nents each printe	ed as Assertion and	d Reason. While answering		
these						
questions you are requ	uired to choose	any one of the f	ollowing response	s.		
A. If both Assertion an	d Reason are tr	ue, Reason is co	rrect explanation of	of the Assertion.		
B. If both Assertion and	d Reason are tr	ue but Reason is	not correct explai	nation of the Assertion.		
C. If Assertion is true b	ut Reason is fal	se.				
D. If both Assertion an	d Reason are fa	lse.				
15. Assertion: Vaccina	tion is also calle	ed preventive in	oculation			
Reason: A vaccir	e prevents the	formation of an	tibodies inside the	body		
Α	В	С	D			
16. Assertion: Antibod	ies have proved	<mark>l effe</mark> ctive in low	ering mortality rat	te.		
				at, fish and poultry feed.		
Α	В	C	D			
17. Assertion: Discover	y of penicillin b	<mark>y Al</mark> exander Fle	ming wa <mark>s a</mark> discove	ery by chance.		
Reason: Fleming	was working on		tum along with sta	aphylococcus bacteria		
Α	В	С	D			
18. Assertion: There is	no chance of tr	<mark>ansm</mark> ission of m	ialari <mark>a to a man</mark> by	the bite of a male		
Anopheles mosquito.						
Reason: It carries	a non virulent s	train of plasmod	lium.			
A B	С	D				
	Se	ection B				
19. Name the type of i	mmunity the co	olostrum provide	es to a new born ba	aby. Write giving example		
where this type of imn				, , ,		
Name two special	types of lymph	_). How do they diff	er in their roles in immune		
response?	, p = 0 0 , p					
20. What is baker's yea	ast? Give its and	nlication				
21. What are advantage						
22. Give full form of EL			<u>:</u>			
23. Differentiate between		•				
25. Differentiate between	sen male and re	OR	y.			
Differentiate hetw	een Turner's sv		wn's syndrome			
Differentiate between Turner's syndrome and Down's syndrome. 24.DNA is better genetic material than RNA. Give two reasons.						
25. Differentiate between						
	_	ection C	3.0.0.3.11			
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26. What is megasporogenesis? Explain the development of eight nucleate embryo sac in

flowering plants.

Describe the characteristics of wind pollinated flowers.

27. How would you find out the genotype of a pea plant with violet flowers? Explain with the help of Punnet's square showing crosses.

OR

A colour blind child is born to a normal couple. Work out a cross to show how it is possible. Mention the sex of this child .

- 28. What are plasmids? What is their role in biotechndogy.
- 29. Give three types of ecological pyramids with example of each type.
- 30. Why should we conserve biodiversity.

Section D

31. Read the following and answer any four question from 1(i) to 1(v) given below:

Population is defined as the total number of individuals of a species present in a particular area at a given time . The scientific study of human population is called demography. The rapid increase in population over a relatively short period is called population explosion. Four basic processes involved in increase or decrease in the population size. Population shows two type of growth; exponential and logistic.

- Write two factor which increase or decrease the population size.
- 2) The shape of curve having logistic growth is _____
- 3) Diagramatically represent exponential and logistic growth curve

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Write the causes of population explosion

32. Read the following and answer any four question given below:

Rajesh, Ravi and Rohit are roommates. They are doing their graduation. Few months back Ravi fell ill. It took him around 3 weeks to recover. Both his friend were absolutely healthy that time. after sometime Rajesh also fell ill from some other disease. This time Ravi and Rohit both contracted the same illness.

Based on the above information, answer the following question.

- 1) Is Ravi suffering from genetic disease
- 2) Why Rajesh's friends suffered from disease
- 3) Differentiate between communicable and non-communicable disease

OF

Guess the name of disease Ravi suffered when his friend fell ill

Section E

33. Describe the role of Agrobacterium tumefaciens in transforming a plant cell.

OR

Draw a labelled diagram of bioreactor. What are different controling apparatus are there in it.

34. Describe the process of DNA fingerprinting. State its application.

OR

What is translation? Describe different steps in translation.

35. The zygote passes through several developmental stages till implantation. Describe each stage briefly with suitable diagrams.

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What are the changes in the ogonia during the transition of a primary follicle to Graffian follicle?

