

COMMON PRE- BOARD EXAMINATION (2017-18)

Class XII

**BIOLOGY**  
( Scoring key)

Marks-70

Time- 3hrs

<b><u>SECTION A</u></b>		
1	Foetal ejection reflex-1/2 Oxytocin----1/2	1
2	Analogous organs-----1/2      convergent evolution—1/2	1
3	Fixes atmospheric nitrogen-1/2      act as biofertilizer---1/2	1
4	Taq polymerase—1/2      thermostable --1/2	1
5	Inactive protoxin in bacteris—1/2      becomes active in alkaline pH of insect-1/2	1
<b><u>SECTION B</u></b>		
6	Devt. of endosperm: Devt. of embryo: Seed formation : fruit formation -1/2×4=2	2
7	Disease caused by deadly microbe which is fast in action-1/2 Vaccine action is slow and can be fatal-1/2 Antitoxin contain preformed antibodies which bring about control-passive immunity-1	2
<b>OR</b>		
	Figure---1      acquired immunity-----1	
8	Definition—1 :    2examples and their applications--4×1/4=1	2
9	Definition-1 :any 2 -1	2
10	Condition when a community does not show much variations in productivity and is resistant to natural calamities or foreign invasions-1 Created experimental plots and showed increased diversity contributed to higher productivity-1	2
<b><u>SECTION C</u></b>		
11	a) seminiferous tubules: figure showing the stages-1/2+1 b) tubules-rete testes-vasa efferentia-epididymis-vas deferens-ejaculatory duct-----1 1/2	3
12	Definition :      utility : difference -----      1+1+1	3
13	Cross-2:    conclusion-1	3

14	Principle- $\frac{1}{2}$ Steps- $2\frac{1}{2}$	<b>3</b>
	<b>OR</b>	
	Definition-- $\frac{1}{2}$ : Goals- $2\frac{1}{2}$	
15	a) polycistronic structural genes:operator, promoter and regulator gene---1 b) figure-----1 c) inducer-explanation----1	<b>3</b>
16	a)figure-----1 b) methane, H <sub>2</sub> ,NH <sub>3</sub> and vapour :discharge of 800degree Celsius.-----1 c) life came from preexisting non living organic molecules --1	<b>3</b>
17	a) definition-----1 b) 2 examples—1 c) suppresses brain function and reduces tension. Depressant. -----1	<b>3</b>
18	A-management of beehives -1 B-handling and collection oh honey and beeswax.-1 Importance -2 points-----1	<b>3</b>
19	Amphicillin and tetracycline gene used as marker-explanation---2 Need for the use of 2 markers-1	<b>3</b>
20	a) Meloidegyne incognitia-----1 b) notes on RNA interference-----2	<b>3</b>
21	a) Exponential and logistic-1 b) Unlimited and limited resources-1 c) Definition of carrying capacity-----1	<b>3</b>
22	Any 5 methods----- $2\frac{1}{2}$ improved and there is a fall in CO <sub>2</sub> and SO <sub>2</sub> ... $\frac{1}{2}$	<b>3</b>
	<b><u>SECTION D</u></b>	
23	a) biodiversity conservation and ecosystem protection anything suitable---2 b) destroyed completely and many species would have become extinct.---2	<b>4</b>
	<b><u>SECTION E</u></b>	
24	a) figure-----2 b) embryo sac contains 3 antipodals,3 synergids, 1 egg and 2 polar nuclei- $1\frac{1}{2}$	<b>5</b>

	the fate of each-----1 <sup>1</sup> / <sub>2</sub>													
	<b>OR</b>													
	a) figure-----2 b) starts at puberty in males and during embryonic stage in females-----1 c) males completed in testes in females in the fallopian tube --2													
25	Cross-----3 Phenotypic ratio-2	<b>5</b>												
	<b>OR</b>													
	a) DNA has thymine which gives stability at the place of uracil. RNA has 2'OH group which makes RNA labile and degradable while DNA is less reactive and more stable.----2 b) explain the 3 terms---3													
26	a) definition---2 b) oncogenes which get switched on in the presence of certain factors-1 c) CT and MRI-----1 d) interferons activate the immune system and destroys the cancer---1.	<b>5</b>												
	<b>OR</b>													
	Complete the given table and add a note on their utility in human.													
	<table border="1"> <thead> <tr> <th>Name of the organism</th> <th>Product/drug/molecule</th> </tr> </thead> <tbody> <tr> <td>Aspergillus niger</td> <td>a</td> </tr> <tr> <td>b</td> <td>Lactic acid</td> </tr> <tr> <td>c</td> <td>Cyclosporin A</td> </tr> <tr> <td>Monascus purpureus</td> <td>d</td> </tr> <tr> <td>Streptococcus</td> <td>e</td> </tr> </tbody> </table>	Name of the organism	Product/drug/molecule	Aspergillus niger	a	b	Lactic acid	c	Cyclosporin A	Monascus purpureus	d	Streptococcus	e	
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Aspergillus niger	a													
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	a) Citric acid-----industries <span style="float: right;">5×1=5</span> b) Lactobacillus-----curd production c) Trichoderma polysporum-----immunosuppressive agent d) Statin-----cholesterol lowering agent e) Streptokinase-----clot buster.													
	----- -----													