

MODEL QUESTION PAPER

BIOLOGY

XII – STANDARD (STATE BOARD)

Candidate should answer Part-I (Bio Botany) and Part II (Bio zoology) in separate answer books

PART-I (Bio-Botany)

Maximum Marks: 35

Section I

All Questions are compulsory.

8 x 1 = 8

1	Identify plant species which is popularly called as “Terror of Bengal”. (a) <i>Eichornia Crassipes</i> (b) <i>Vallisneria spiralis</i> (c) <i>Pistia stratiotes</i> (d) <i>Zostera marina</i>	1
2	Gametes are never hybrid’ is concluded by _____. (a) Law of dominance (b) Law of segregation (c) Law of lethality (d) Law of independent assortment	1
3	EcoRI cleaves the DNA at _____. (a) AGGGTT (b) GTATATC (c) GAATTC (d) TATAGC	1
4	People’s movement for the protection of environment in Sirsi of Karnataka is _____. (a) Chipko movement (b) Appiko movement (c) Amirtha Devi Bishwas movement (d) None of the above	1
5	Which of the following is incorrectly paired? (a) Wheat – Himgiri (b) Rice – Ratna	1

	(c) Milch breed – sahiwal (d) Pusa komal – Brassica	
6	<i>Tectona grandis</i> is coming under the family _____. (a) Lamiaceae (b) Fabaceae (c) Dipteroaipaceae (d) Ebenaceae	1
7	_____ is the climax community of hydrosere. (a) Reed Swamp stage (b) Marsh meadow stage (c) Shrub stage (d) Forest stage	1
8	The amino acid serine is formed in _____ during C <sub>2</sub> cycle (a) Peroxisome (b) Chloroplast (c) Mesophyll (d) Mitochondria	1

### Section-II

Answer any four questions.

4 x 2 = 8

9	Draw and label the structure of a mature embryo sac of angiosperm.	2
10	Define the terms (a) Bioventing (b) Bioaugmentation	2
11	What is silvopasture system? How it helps economy?	2
12	Define Photorespiration	2
13	Write the formula for measuring the actual growth in the length of a plant	2
14	What is meant by recurrent parent?	2

### Section-III

Answer any **three questions**. Question No. 19 is compulsory

**3 x 3 = 9**

15	Distinguish between primary production and secondary production.	3
16	What is co-evolution? Explain with example.	3
17	Point out the reasons for Mendels' success in his breeding experiment.	3
18	What do you mean by Germplasm conservation? Describe it.	3
19	Write 3 differences between cyclic and non-cyclic photophosphorylation	3

### Section-IV

Answer all the questions:

**2 x 5 = 10**

20	a) Point out the applications of plant tissue culture. Or a.) Explain the coupling aspect in <i>Lathyrus odoratus</i>	5
21	a) Write down the outline classification of Bentham and Hooker Or b) Define respiratory quotient and work out the respiratory quotient of a carbohydrate and that of anaerobic respiration.	5

### PART II (BIO - ZOOLOGY)

Maximum Marks: 35

#### SECTION I

All Questions are compulsory.

**8 x 1 = 8**

1	Select the correct production site and action site of Relaxin. (a) Hypothalamus and pituitary gland (b) Pituitary gland and Pelvic joints and cervix (c) Placenta and pelvic joint and cervix (d) Hypothalamus and placenta	1
2	Fusion of young individuals produced immediately after the mitotic division of adult parent cell is called _____. (a) Merogamy	1

	(b) Anisogamy (c) Hologamy (d) Paedogamy	
3	Mangolism is a genetic disorder which is caused by the presence of an extra chromosome number _____. (a) 20 (b) 21 (c) 23 (d) 19	1
4	DNA finger printing techniques was developed by _____. (a) Jacob and Monod (b) Alec Jeffreys (c) Frederick Sanger (d) Hershey and Chase	1
5	Identify the correct sequence of periods from oldest to youngest (a) Cambrian → Permian → Devonian → Silurian → Ordovician (b) Permian → Silurian → Devonian → Ordovician → Cambrian (c) Permian → Devonian → Silurian → Cambrian → Ordovician (d) Cambrian → Ordovician → Silurian → Devonian → Permian	1
6	Spread of cancerous cells to distant sites is termed as _____. (a) Metastasis (b) Oncogenes (c) Proto-oncogenes (d) Malignant neoplasm	1
7	Assertion (A): Streptomycin is an antibiotic. Reason (R): Antibiotic are microbial chemicals inhibits the growth of pathogenic microbe. (a) A is right R is wrong (b) R explains A (c) A and R are wrong (d) A is wrong but R is right	1

8	World Ozone Day was observed on _____. (a) September 16 <sup>th</sup> (b) October 12 <sup>th</sup> (c) December 1 <sup>th</sup> (d) August 18 <sup>th</sup>	1
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### SECTION-II

Answer any **four** questions.

**4 x 2 = 8**

9	Name the active chemical found in the medicinal plant <i>Rauwolfia vomitoria</i> . What type of diversity does it belongs to?	2
10	State any two unique features of ELISA test.	2
11	Define Anaphylaxis.	2
12	Who is Cro-Magnon?	2
13	What is S – D sequence?	2
14	Expand (a) GIFT (b) ICSI	2

### SECTION-III

Answer any **three** questions

**3 x 3 = 9**

15	Write a short note on encystment in amoeba.	3
16	Draw a schematic representation of human oogenesis.	3
17	Comment on the methods of Eugenics.	3
18	Both strands of DNA are not copied during transcription. Give reason.	3
19	What is Q <sub>10</sub> value? How it is calculated?	3

### SECTION -IV

Answer **all** the questions .

**2 x 5 = 10**

20	(a) Differentiate between r-selected species and k-selected species. [OR] (b) Give a detailed account on ethanol production by microbes and the uses of ethanol.	5
21	(a) How DNA is packed in an eukaryotic cell? [OR] (b) Explain Oparin – Haldane hypothesis on evolution.	5