

**SECOND REVISION TEST - 2023**

CLASS : 12

TIME : 3 HOURS

BIOLOGY

MARKS : 70

Note : Candidate should answer PART - I (Bio-Botany) and PART - II (Bio-Zoology) in separate answer sheets.

**PART - I BIO - BOTANY (1.30 Hrs - 35 Marks)****I. Answer all the questions**

8 x 1 = 8

- The dominant epistasis ratio is  
a. 9 : 3 : 3 : 1      b. 12 : 3 : 1      c. 9 : 3 : 4      d. 9 : 6 : 1
- The branch of science which deals with the study of pollen grain is  
a. Cytology      b. Zymology      c. Ecology      d. Palynology
- Assertion (A) : Gamma rays are generally used to induce mutation in wheat varieties.  
Reason (R) : Because they carry lower energy to non-ionize electrons from atom  
(a) A is correct, R is correct explanation of A    (b) A is correct, R is not correct explanation of A  
(c) A is correct, R is wrong explanation of A    (d) A and R is wrong
- Virus tree plants are developed from  
a. organ culture    b. moristem culture    c) protoplast culture    d) cell suspension culture
- Match the following :  

Column A	Column B	1	2	3	4
1. Exonuclease	i) add or remove phosphate	a) i	ii	iii	iv
2. Endonuclease	ii) binding the DNA	b) iii	iv	ii	i
3. Alkaline phosphate	iii) cut the DNA at terminus	c) i	iii	ii	iv
4. Ligase	iv) cut the DNA at middle	d) iii	iv	i	ii
- Pedogenesis refers to  
a. Fossils      b. Water      c. Population      d. Soil
- The following step is not mechanism of decomposition  
a. catabolism      b. leaching      c. sedimentation      d. mineralisation
- Tectone grandis is coming under family  
a. Lamiaceae    b) Fabaleae    c) Diptero Caipaceae    d) Ebenaceae

**II. Answer any four from the following.**

4 x 2 = 8

- Totipotency - explain
- Define - SLF.
- Write advantages of Bt cotton?
- What is Psychophily?
- What is 'Reciprocal cross'?
- What is phytoremediation? with an example.

**III. Answer any three from the following. Q.No. 18 is compulsory.**

3 x 3 = 9

- What is seed ball? and its uses?
- Write the difference between habitate and Niche?
- Draw the structure of embryosae and neat labelled parts?
- Write uses of gene mapping?
- Pyramid of energy is always upright. Give reasons.

**IV. Answer all in detail.**

2 x 5 = 10

- a) Write a suitable diagram explain the structure of an Ovule (OR)  
b) Describe the dominant opistasis with an example.
- a) Write the protocol for artificial seed preparation. (OR)  
b) What are the different types of hybridization?



**PART - II - BIO - ZOOLOGY (1.30 Hrs - 35 Marks)****I. Answer all the questions****8 x 1 = 8**

- The mature sperms are stored in the  
 a. Epididymis    b. Seminiferous tubules    c. Prostate gland    d. Vas deference
- Klinefelters syndrome is characterized by a karyotype of  
 a. XYY    b. XO    c. XXX    d. XXY
- DNA Replication takes place at ..... phase of cell cycle  
 a. G<sub>1</sub>    b. S    c. G<sub>2</sub>    d. M
- Which period was called "Age of Fishes"?  
 a. permian    b) Triassic    c) DevOriun    d) Ordovician
- The Relationship between suckerfish and shark is  
 a. Competition    b) Commensalism    c) Predation    d) parasitism
- Who proposed the Germplasm theory?  
 a) Darwin    b) August weisman    c) Lamark    d) Alfred wallace
- Organisms which can survive a wide range of Temperature are called  
 a. Ectotherms    b) Eurytherms    c) Endotherms    d) Stenotherms
- Which of the following Forests is known as The Lungs of the palnet Earth?  
 a. Tundra Forest    b) Rain Forest of North East India    c) Taiga Forest    d) Amazon Rain forests

**II. Answer any four questions :-****4 x 2 = 8**

- Define : Gametogenesis
- What is surrogacy?
- Write the cause of Down syndrome?
- Define : Transcription
- What does Genetherapy mean?
- What is the most important Application of Human Stem cells?

**III. Answer any three questions. Q.No. 18 is compulsory :-****3 x 3 = 9**

- What is Regeneration? Explain its types?
- Explain any three viral STD and mention their symptoms?
- What is pedogenesis? Mention any two of its functions?
- What is referred to as Bio-magnification?
- Differentiate Natality from Mortality?

**IV. Answer all the questions in detail.****2 x 5 = 10**

- Describe the structure of the Human Ovum with a neat labelled diagram?

**(OR)**

Explain the various phases of the menstrual cycle?

- What is Karyotyping? Write the applications of Karyotyping?

**(OR)**

List the Adaptations of Aquatic animals?