

**Class : 12**Register  
Number**COMMON HALF YEARLY EXAMINATION - 2022 - 23**

Time Allowed : 3.00 Hours]

**BIOLOGY**

[Max. Marks : 70

**Part - I (Bio-Botany) (Marks : 35)**  
**Section - I****Note. (i) Answer All the questions.****8×1=8****(ii) Choose the most appropriate answer from the given four alternatives and write the option code and corresponding answer.**

- Which one of the following plant reproduces by leaf?  
a) Agave                      b) Bryophyllum                      c) Gladiolus                      d) Potato
- Mutations can be induced with  
a) Gamma radiations      b) Infrared radiations      c) IAA                      d) Ethylene
- Solidifying agent used in plant tissue cellulose is  
a) Nicotinic acid              b) Cobaltous chloride      c) EDTA                      d) Agar
- Soil water available for plant is  
a) Gravitational water                      b) Chemically bound water  
c) Capillary water                      d) Hygroscopic water
- Which one of the following crop varieties correct matches with its resistance to a disease?  

Variety	Resistance to diseases
a) Pusa Komal	Bacterial blight
b) Pusa sadabahar	White rust
c) Pusa Shubhra	Chilli Mosaic Virus
d) Brassica	Pusa Swarhim
- The time duration for Sterilization process by using autoclave is — minutes and the temperature is —  
a) 10 to 30 minutes and 125°C                      b) 15 to 30 minutes and 121°C  
c) 15 to 20 minutes and 125°C                      d) 10 to 20 minutes and 121°C
- Consumption of which one of the following foods present the kind of blindness associated with Vitamin A deficiency?  
a) Flavr Savr                      b) Canola                      c) Golden rice                      d) Bt. Brinjal
- Assertion (A) :** Gamma rays are generally use 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

**SECTION - 2****Note : Answer any four questions.****4×2=8**

- Distinguish between Tenuinucellate and Crassinucellate Ovules.
- Name the Chemicals used in Gene transfer.
- What are the uses of Gene Mapping?
- What is meant by Pedology?
- Write the difference between redifferentiation and dedifferentiation.
- What are called King and Queen of Species?

**SECTION - 3****Note : Answer any three questions. Question No. 19 is compulsory.****3×3=9**

- What is tapetum? What are its function?
- Distinguish between Habitat and Niche.
- Mention the Name of Man Made Cereals. How is it formed?
- Give an account of Cryopreservation?
- What do you know about PBR322?
- What are the objectives of Plant Breeding?

**SECTION - 4****Note : Answer all the questions.****2×5=10**

- (a) Give an account of Protoplast culture with diagram?  
(b) Draw the Flow chart of Ploidy?
- (a) Explain Ten Percent Law with example  
(b) How will you prepare an Organic pesticide for your Home Garden with the Vegetables available from your Kitchen Garden?

**OR****OR****CH / 12 / Bio / 1**

**PART – II ( BIO-ZOOLOGY) (Max. Marks: 35)**  
**SECTION – I**

**Note:** (i) Answer all the questions

(ii) Choose the most appropriate answer from the given four Alternatives and write the option code and the corresponding answer 8 x 1 = 8

1. Which is the correct order of reproductive events in higher animals?  
 a) gametogenesis→fertilization→celavage→organogenesis→gastrulation  
 b) Fertilization→gametogenesis→cleavage→gastrulation→organogenesis  
 c) Gametogenesis→cleavage→fertilization→gastrulation→organogenesis  
 d) gametogenesis→fertilization→cleavage→gastrulation→organogenesis
2. Which one of the following is true regarding HIV?  
 a) It is a sexually transmitted killer disease  
 b) It is a bacterial disease which causes immune deficiency  
 c) The genetic material is double stranded RNA  
 d) It is capable of infecting babies through droplet infection.
3. Haemophilia is more common in males because it is a  
 a) Dominant trait carried by Y chromosome  
 b) Recessive character carried by X chromosome  
 c) Dominant trait carried by X chromosome.  
 d) Recessive trait carried by Y chromosome.
4. Which one of the following is not true regarding DNA?  
 a) It is the genetic material present universally in all organisms.  
 b) It is a polymer of nucleotides  
 c) It is a self - replicating molecule  
 d) It is a storage molecule of genetic information
5. Which period is called as age of fishes?  
 a) Permian  
 b) Triassic  
 c) Devonian  
 d) Ordovician
6. Which one of the following is correctly matched?  
 a. Kala azar - Tinea pedis  
 b) Athlete's foot - Sand fly  
 c) Amoebiasis - trophozoite  
 d) African sleeping sickness - flea
7. **Assertion (A) :** Probiotic microbes are involved in idly preparation.  
**Reason (R) :** Lactobacillus lacti is used in it.  
 a) Both (A) and (R) are true and (R) explains (A)  
 b) Both (A) and (R) are true and (R) does not explain (A)  
 c) Both (A) and (R) are false  
 d) (A) is true but (R) is false
8. Which of the following is known as lungs of planet Earth?  
 a) Tundra forest  
 b) Rain forest of Northeast India  
 c) Taiga forest  
 d) Amazon rain forest

**SECTION - II**

**Note :** Answer any four of the following questions.

4x2=8

9. What is Parthenogenesis? Give two examples from animals?
10. Differentiate Foeticide from infanticide.
11. State Hardy Weinberg equilibrium.
12. What is Metastasis?
13. Differentiate antibodies from antibiotics?
14. What you mean by Sacred groves?

**SECTION - III**

**Note :** Answer any three of the following questions. Question Number 19 is compulsory. 3x3=9

15. How can we control Eutrophication?
16. Write an adaptations of Eurythermy?
17. Mention the role of acrosomal reaction and the formation of Fertilization membrane.
18. Write the characteristics of Huntington Chorea?
19. Why tRNA is called an adaptor Molecule?

**SECTION - IV**

**Note :** Answer all the questions.

2x5=10

20. (a) Describe the structure of human Ovum with a neat labelled diagram. OR  
 (b) Explain the process of DNA Replication.
21. (a) Describe the structure of immunoglobulin molecules. OR  
 (b) List out the various causes for biodiversity losses.

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