

HALF YEARLY EXAMINATIONS - 2022

BIOLOGY

12 - STD

TIME: 3.00 Hrs

BIO - BOTANY

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Marks: 70

PART - I**Answer all the questions. Choose the Correct Answers.**

8×1=8

- 1) Identify the incorrect pair
 - a) sporopollenin - exine of pollen grains.
 - b) Tapetum - Nutritive tissue for developing microspores
 - c) Nucellus - Nutritive tissue for developing embryo embryo
 - d) obturator - directs the pollen tube into micropyle
- 2)
 - 1) Independent assortment induce genetical variation
 - 2) Ascorbic acid decreases the damage caused by by hydrogen peroxide
 - 3) Genetic map are useful in protecting results. of trihybrid Crosses
 - 4) Codine used as Cardiac tonic of the above statements, the correct statements are respectively.
 - a) 1 and 3 b) 1, 2, 4 c) I and 4 d) 4 only
- 3) In a fresh water environment like pond, rooted autotrophes are
 - a) Nymphaea and typha b) Ceratophyllum and Utricularia. c) Wolffia and pista d) Azolla and lemna
4. Which of the following is not a gaseous cycle
 - a) oxygen b) carbon c) Nirogen d) calcium
5. Match the following:

A. Indian Acalypha	1) Psychoactive drug.
B. opium poppy	2) Calcium
C. Veldt grape.	3) Entrepreneurial plant
D. Seaweed liquid. fertilizer -	4) Ringworms

 - a) a - 4 c - 3 c - 1 d - 2 b) a - 4 b - 1 c - 3 d - 4 c) a - 4 b - 2 c - 1 d - 3 d) a - 4 b - 1 c - 2 d - 1
- 6 **Statement (A):** Energy pyramid is always upright
Reason (R): Gradual increase in energy transfer at a successive trophic level from producers to upper levels.
 - a) A and R wrong b) A Correct R wrong c) A and R Correct d) A wrong R correct
7. Protoplast viability is tested with before the culture.
 - a) Fluorescein diacetate. c) cation concentrations. b) PEG d) Sodium acetate.
- 8 Depletion of which gas in the atmosphere. Can lead to on increased incidence of Cancer?
 - a) Methane b) Ozone c) Ammonia d) Nitrous oxide

PART-II**Answer Any Four of the following questions.**

4 x 2 = 8

9. What is orinithophily?
10. What is syndenesis?
11. Write any two characters of vectors
12. What is cell suspension culture?
13. Define positive Interaction with examples.
14. What is PAR?

PART - III**Answer any three of the following question.. Question No-14 is compulsory.**

3x3=9

15. Write any Three effects of global warming on plants.
16. Give any three examples for Ex situ Conservation.
17. Write the Botanical name, family and of uses Cashewnut.
18. Draw and label the parts of Mature Embryo.
19. Differentiate Linkage and crossing. over.

PART-IV**Answer all the questions.**

2 x 5 = 10

20. Write the applications of plant Tissue culture. (OR) Define Heterosis. Explain its types
21. Explain the First law of thermodynamics with examples. (OR) Give an account on Golden Rice.

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PART - I BIO-ZOOLOGY (SECTION -1)

TOTAL MARKS: 35

Note: Answer all the questions Choose the most appropriate answer.

8 x 1 = 8

1. Biston betularia is best example for
a) Convergent evolution (b) divergent evolution c) Industrial melanism (d) None of the above
2. Which of the following is true about Rh factor in the offspring of a parental combination Ddx Dd
a) All will be Rh-positive b) Half will be Rh positive
c) About 3/4 will be Rh negative d) About one fourth will be Rh
3. Read the given statements and select the correct option negative.
Statement 1: Diaphragms, cervical caps and Vaults are made of rubber and are inserted into the female reproductive tract to cover the Cervix before coitus
Statement 2: They are chemical barriers of Conception and are reusable.
a) Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.
b) Both statements 1 and 2 are correct but Statement 2 is not the correct explanation of statement 1.
c) statement 1 is correct but statement 2 is incorrect. d) Both statements 1 and 2 are incorrect
4. This codon has dual function both its acts as initiator codon and also codes for the amino acid methionine
a) UAA (b) AUG c) UAG (d) UGA
5. With which of the following, 'the Agenda 21' of Rio Summit, 1992 is related to?
a) Sustainable development. b) Combating the consequences of population,
c) Mitigation of norms of Green House gases (HGS) emission.
d) Technology transfer mechanism to developing Countries for clean-energy production.
6. Suspend is a type of animal responses observed in the animals which does not include this.
a) hibernation b) diapause c) Aestiva tion (d) Migration.
8. Which of the following microorganism is used for production of citric acid in industries?
a) Lactobacillus bulgaris (b) Penicillium species. c) Aspergillus niger (d) Rhizopus nigricans.
7. Chickengunya is a
a) Viral disease (b) Bacterial c) Fungal d) Protozoan

SECTION - 2**NOTE: Answer any four questions only.**

4X 2=8

9. What is Eutrophication?
10. What are the two types of Epimorphosis?
11. Differentiate Somatic cell gene therapy from germ cell gene therapy.
12. Write short note on Saheli.
13. What the positive attitudes created due to to the participation in an exercise Programme?
14. Mention the extra embryonic membranes.

SECTION - 3**Notes Answer any three Question number 19 of the following questions Compulsory.**

15. What is Lyon's hypothesis? 3 x 3 = 9
16. What is parthenogenesis? Give two examples reproduce by parthenocarpic of animals method.
17. Draw a neat labelled sketch of Immunoglobulin.
18. What is amniocentesis? Why this test is banned in country?
19. Differentiate birth rate from death rate.

SECTION - 4**NOTE: Answer the following.**

2 x 5 = 10

20. A) Explain the types of fossilization. B) State any three goals of human genome Project. (OR)
Explain the various phases of menstrual cycle.
21. What are the various reasons for biodiversity losses.? (OR)
Give short notes on. (a) clot buster (b) Sub-unit recombinant vaccines.