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Register No.

First Revision Examination - 2024

Time : 3.00 Hrs.

Marks : 70

BIOLOGY

BIO - BOTANY

PART - A

I. (i) Answer all the questions.

8x1=8

1. An eminent Indian embryologist is

- a) S. R. Kashyap b) P. Maheswari c) M. S. Swaminathan d) K.C. Mehta
2. Which one of the following is an example of polygenic inheritance?
a) Flower colour in *Mirabilis jalapa* b) Production of male honey bee c) Pod shape in garden pea
d) Skin colour in humans
3. Due to incomplete linkage in maize the ratio of parental and recombinants are?
a) 50:50 b) 7:1:1:7 c) 96.4:3.6 d) 1:7:7:1
4. The prevention of large scale loss of biological integrity
a) Biopatent b) Bioethics c) Biosafety d) Biofuel
5. One green house gas contributes 14% of total global warming and another contributes 6%. These are respectively identified as
a) N_2O and CO_2 b) CFCs and N_2O c) CH_4 and CO_2 d) CH_4 and CFCs
6. New world species of cotton
a) *Gossypium arboreum* b) *G. herbaceum* c) Both a and b d) *G. barbadense*
7. The unit for measuring ozone thickness
a) Joule b) Kilos c) Dobson d) Watt
8. Eco system consists of
a) decomposers b) Producers c) Consumers d) All of the above

PART - B

Note: Answer any four questions.

4x2=8

9. What are the disadvantages of self pollination?
10. What are the materials used to grow micro organisms like spirulina?
11. What is phytoremediation?
12. Pyramid of energy is always upright. Give reason?
13. What are the steps in Hybridization?
14. Give definitions for organic farming?

PART-C

Note: Answer any three questions. Question No. 19 is compulsory.

3x3=9

15. Differentiate incomplete dominance and co-dominance.
16. What is gene mapping? Write its uses?
17. Give an account on Cryopreservation?
18. Differentiate primary introduction from secondary introduction.
19. Draw the flow chart on bio diversity conservation.

PART-D

Note. Answer all the questions.

2x5=10

20. a) With a suitable diagram explain the structure of an ovule? (OR)
b) Mention the application of Bio technology.
21. a) Enumerate the anatomical adaptations of xerophytes. (OR)
b) How will you prepare an organic pesticide for your home garden with the vegetables available from your kitchen?

BIO - ZOOLOGY (35 MARKS)**PART - I****8 x 1 = 8****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.**

1. Who proposed the Germplasm theory?
a) Darwin b) August Weismann c) Lamarck d) Alfred Wallace
2. The male sex hormone testosterone is secreted from
a) Sertoli cells b) Leydig cell c) Epididymis d) Prostate gland
3. Allergy involves
a) IgE b) IgG c) Ig d) IgM
4. In which mode of reproduction variations are seen
a) Asexual b) Parthenogenesis c) sexual d) Both (a) and (b)
5. Co-dominant blood group is
a) A b) AB c) B d) O
6. The most common substrate used in distilleries for the production of ethanol is _____
a) Soya meal b) Ground gram c) Molasses d) Corn meal
7. Conservation of biodiversity with their natural habitat is
a) Insitu conservation b) Exsitu conservation c) In vivo conservation d) Invitro conservation
8. In the E-waste generated by the mobile phones, which among the following metal is most abundant?
a) Copper b) Silver c) Palladium d) Gold

PART - II**Answer any four of the following questions:****4 x 2 = 8**

9. What is parthenogenesis? Give two examples from animals.
10. Mention the symptoms of Downs syndrome.
11. List out the major gases seems to be found in the primitive earth.
12. What is biological oxygen demand?
13. Define: Endemism.
14. What is soil permeability?

PART - III**Answer any 3 of the following in which question No 18 is compulsory.****3 x 3 = 9**

15. Expand the following.
a) ZIFT b) ICSI c) FSH
16. Draw a labeled sketch of a human ovum.
17. State any three goals of the human genome project.
18. "Amazon forest is considered to be the lungs of the planet"-Justify this statement.
19. Write notes on the following:
a) Eutrophication b) Algal Bloom

PART-IV**Answer all the question:****2x5=10**

20. a) Explain the various phases of the menstrual cycle.
(OR)
b. Explain the formation of a nucleosome.
21. a) Explain the structure of immunoglobulin with suitable diagram.
(OR)
b) Explain how recombinant Insulin can be produced.