

12 R

Time : 3.00 Hrs.

Half Yearly Examination- 2024
BIOLOGY

Register No.

Marks : 70

PART - I**PART-I (BIO-BOTANY) SECTION-I****Note : i) Answer all the question.****8 x 1 = 8****ii) Choose and write the correct option code with corresponding answer.**

1. Changing the codon AGC to AGA represents
a) missense mutation b) nonsense mutation c) frame shift mutation d) deletion mutation
2. ECORI Cleaves DNA at
a)AGGGTT b) GTATATC c) GAATTC d) TATAGG
3. The phenomenon of the reversion of mature cells to the meristematic state is called _____
a) totipotency b) differentiation c) redifferentiation d) dedifferentiation
4. The epiphytic higher plants gets its nutrients and water from the atmosphere with the help of _____ tissue. a) haustorial b) velamen c) vascular d) cambial
5. Which of the following represents megagametophyte?
a) ovule b) embryo sac c) nucellus d) endosperm
6. The unit of measuring ozone thickness is _____ a) Jule b) Kilos c) Dobson d) Watt
7. When one allele is not completely dominant to another allele it shows
a) incomplete dominance b) codominance c) epistatic d) hypostatic
8. The fusion product of protoplasts without nucleus of different cell is called _____
a) hybrid b) embryoids c) artificial seed d) cybrid

SECTION - II**Answer any four of the following questions.****4 x 2 = 8**

9. What is layering?
10. What is pseudo cereal? Give examples.
11. Write the names of any two millets with their binomials (Botanical name)
12. What is back cross?
13. Write the uses of coffee.
14. What is bioremediation?

SECTION - III**Answer any three of the following questions. Q.No.19 is compulsory.****3 x 3 = 9**

15. Name the chemicals used in gene transfer.
16. Differentiate Habitat and Niche.
17. Write any three advantages of artificial seed.
18. How does Rhytidome protect the plant against forest fire?
19. Draw and label T.S. of mature anther.

SECTION - IV**Answer all the questions.****2 x 5 = 10**

20. a) What are the objectives of plant breeding? (OR)
b) What is endosperm? Explain the types.
21. a) Explain coupling and repulsion aspects of linkage with help of examples. (OR)
b) Write the morphological adaptations of xerophytes.

BIO - ZOOLOGY (Marks : 35)

I. Answer the following.

8 x 1 = 8

1. In which type of parthenogenesis are only male produced?
a) arrhenotoky b) thelytoky c) amphitoky d) both a and b
2. The most important hormone initiating and maintaining lactation after birth is
a) Oestrogen b) FSH c) prolactin d) oxytocin
3. A contraceptive pill prevents ovulation by
a) blocking fallopian tube b) inhibiting release of FSH and LH
c) stimulating release of FSH and LH d) causing immediate degeneration of released ovum.
4. Klinefelter's syndrome is characterized by a karyotype of
a) XYY b) XO c) XXX d) XXY
5. A mRNA molecule is produced by
a) Replication b) Transcription c) Duplication d) Translation
6. Modern man belongs to which period?
a) Quaternary b) Cretaceous c) Silurian d) Cambrian
7. Allergy involves
a) IgE b) IgG c) IgA d) IgM
8. ELISA is mainly used for
a) Detection of mutations b) Detection of pathogens c) Selecting animals having desired traits d) Selecting plants having desired traits

II. Answer any 4 of the following.

4 x 2 = 8

9. What is inhibin? State its functions.
10. Amniocentesis, the fetal sex determination is banned in our country. Is it necessary? Comment.
11. What is lyonisation?
12. Why the human genome project is called a mega project?
13. What is Eutrophication?
14. Define Endemism.

III. Answer any 3 of the following. Question No.19 is compulsory.

3 x 3 = 9

15. Differentiate Binary fission in Amoeba and multiple fission in Plasmodium.
16. What is colostrum? Write its significance.
17. Differentiate foeticide and infanticide.
18. What are the applications of karyotyping? (any 3)
19. Rearrange the descent of human evolution.
Australopithecus → Homo erectus → Homo sapiens → Ramapithecus → Homo habilis.

IV. Answer the following.

2 x 5 = 10

1. a) Explain the structure of immunoglobulin. (OR)
b) Discuss the role of an individual to reduce environmental pollution.
2. a) Uses of Transgenesis. (OR)
b) Draw the cross between a normal visioned man and colourblind woman.