

**Class : 12**Register  
Number**COMMON HALFYEARLY EXAMINATION - 2022 - 23**

Time Allowed : 3.00 Hours]

**BOTANY**  
Part - I

[Max. Marks : 70

**Answer All the questions.****15x1=15**

1. Virus free plants are developed from
  - a) Organ culture
  - b) Meristem culture
  - c) Protoplast culture
  - d) Cell Suspension culture
2. In which techniques Ethidium Bromide is used
  - a) Southern Blotting
  - b) Western Blotting
  - c) Polymerase Chain Reaction
  - d) Agarose Gel Electrophoresis
3. Algae which is used for the production of single cell protein is
  - a) cellulomonas
  - b) Alcallgenes
  - c) Spirulina
  - d) Agaricus
4. DNA element with ability to change position is called
  - a) Cistron
  - b) Transposon
  - c) Intron
  - d) Recon
5. "Gametes are never hybrid" This is a statement of
  - a) Law of daninance
  - b) Law of Independent assortment
  - c) Law of Segregation
  - d) Law of random fertilization
6. Ruminate endesperm is found in
  - a) Cocos
  - b) Areca
  - c) Vallisneria
  - d) Arachis
7. A plant called X possesses small flower with reduced periant and versatile anther. The probable agent for pollination would be
  - a) Water
  - b) air
  - c) butterflies
  - d) beetles
8. A specific place in an ecosystem where an organism lives and performs its function is
  - a) habitat
  - b) niche
  - c) landscape
  - d) biome
9. Soil water available for plants is
  - a) gravitational water
  - b) chemically bound water
  - c) Capillary water
  - d) hygroscopic water
10. Which of the following plant produces cardiac glycosides.
  - a) Calotropis
  - b) Acacia
  - c) Nepenthes
  - d) Utricularia
11. Which of the following is not a sedimentary cycle
  - a) Nitrogen cycle
  - b) Phosphorous cycle
  - c) Sulphur cycle
  - d) Calcium cycle
12. The unit for measuring ozone thickness
  - a) Joule
  - b) Kilos
  - c) Dobson
  - d) Watt
13. Jaya and Ratna are the semi dwarf varieties of
  - a) wheat
  - b) rice
  - c) cowpea
  - d) musterd
14. The active principle trans-tetra hydro can abial is present in
  - a) Opium
  - b) Curcuma
  - c) Marijuana
  - d) Andrographis
15. "Queen of spices" is
  - a) pepper
  - b) cardamomum
  - c) Turmeric
  - d) Tamarind

CH / 12 / Bot / 1

**PART - II**

**II. Answer any six questions. Question No. 24 is Compulsory.**

**6x2=12**

16. What is Vivipary? Name a plant group that exhibits vivipary.
17. Productivity of profundal zone will be low. why?
18. What is ozone hole?
19. Name the chemicals used in gene transfer?
20. What are Splicesomes?
21. Name the seven contrasting traits of mendel.
22. Pollination in Gymnosperms is different from Angiosperms - Give reasons.
23. Write short notes on Pollen Kitt.
24. Enumerate the uses of turmeric.

**PART - III**

**III. Answer any six questions. Question No. 33 is Compulsory.**

**6x3=18**

25. Write a note on heterosis.
26. Write the effects of Global warming in plants
27. Pyramid of energy is always upright. Give reasons.
28. List out the effects of fire to plants.
29. What is thermal stratification? Mention their types.
30. Give an account on cryopreservation.
31. Write the advantages of Bt cotton
32. What is gene mapping? Write its uses.
33. Draw and label T. S. of mature anther.

**PART - IV**

**IV. Answer all the questions.**

**5x5=25**

34. (a) What is endosperm. Explain the types.

**OR**

- (b) Enumerate the anatomical adaptations of xerophytes.

35. (a) Generally human activities are against to the ecosystem, where as you a student how will you help to protect ecosystem?

**OR**

- (b) Differentiate continuous variation with discontinuous variation.

36. (a) What attributes make arabidopsis a suitable model plant for molecular genetic research?

**OR**

- (b) What are the effects of deforestation?

37. (a) What are the different types of hybridization?

**OR**

- (b) Compare the various types of Blotting techniques?

38. (a) Explain the basic concepts involved in plant tissue culture.

**OR**

- (b) How will you prepare an organic pesticide from your home garden with the vegetables available from your kitchen.

**CH / 12 / Bot / 2**