



Date: 15-04-2024

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A - K1 (CO1)

Answer ALL the Questions (10 x 1 = 10)

1. Fill in the blanks

- a) The production of two different types of spores in land plants is called _____.
 - b) The stem of _____ is characterised by occurrence of Vallecular canal and Carinal canals.
 - c) The dominant phase of Gymnosperms is _____.
 - d) The endophytic algae present in the coralloid root of *Cycas* is _____.
 - e) The study of fossil plants is called _____.
- 2. State whether the following statements are TRUE or FALSE**
- a) Stelar evolution studied in Pteridophytes.
 - b) The common name for *Lycopodium* is horse-tail fern.
 - c) The members of Coniferales are called as living fossils.
 - d) The ovule after fertilization develops into seed.
 - e) *Williamsonia* is the extinct genus of Pteridophyte.

SECTION A - K2 (CO1)

Answer ALL the Questions (10 x 1 = 10)

3. Choose the correct answer

- a) An example of Psilophyta is _____.
a) *Marsilea* b) *Lycopodium* c) *Psilotum* d) *Adiantum*
 - b) *Psilotum* is commonly called as _____.
a) Whisk fern b) Maiden hair fern c) Club moss d) Water fern
 - c) An example of Coniferales is _____.
a) *Cycas* b) *Pinus* c) *Gnetum* d) *Ephedra*
 - d) *Gnetum* species have certain characteristics of _____.
a) Bryophyte b) Pteridophytes c) Angiosperms d) none of the above
 - e) Eras are split into smaller units known as _____.
a) Epoch b) Period c) Eon d) Age
- 4. Answer the following, each in about 50 words**
- a) Distinguish between Apospory and Apogamy.
 - b) Mention the parts of *Lycopodium* cone.
 - c) Comment on the concept of Pro-gymnosperms.
 - d) What is meant by Circinate vernation?
 - e) List the divisions of Geological time scale.

SECTION B - K3 (CO2)

Answer any TWO of the following in 500 words (2 x 10 = 20)

Draw diagrams / flowcharts wherever necessary

- 5. Interpret the various types of steles in Pteridophytes.
- 6. Explain the life cycle of *Adiantum*.
- 7. Describe the internal structure of *Pinus* needle.
- 8. Elaborate the sexual reproduction of *Gnetum*.

SECTION C – K4 (CO3)

Answer any TWO of the following in 500 words (2 x 10 = 20)

Draw diagrams / flowcharts wherever necessary

9. Describe the structure of *Marsilea* sporocarp.
10. List the salient features of *Pteridospermales*.
11. Enumerate the economic importance of Gymnosperms.
12. Discuss the fossil forms of Pteridophytes.

SECTION D – K5 (CO4)

Answer any ONE of the following in 1000 words (1 x 20 = 20)

Draw diagrams / flowcharts wherever necessary

13. Elucidate the sexual reproduction and life cycle of *Equisetum*.
14. Outline the classification of Gymnosperms as proposed by Sporne (1965). Add a note on its characteristic features.

SECTION E – K6 (CO5)

Answer any ONE of the following in 1000 words (1 x 20 = 20)

Draw diagrams / flowcharts wherever necessary

15. Illustrate and explain the life cycle of *Cycas*.
16. Describe the different methods of fossilization.

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