

Botany (P.G.)

[CBCS]

M.Sc. Second Semester End Examination-2024

(Regular & Supplementary Paper)

PAPER-BOT-202

[Palaeobotany, Palynology and Plant Reproductive Biology]

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

[Use separate answer script for each Unit]

Unit – I

[F.M – 20]

Group-A

1. Answer any four question from the followings: 4x1=4

- a. What is the difference between petrification and compression?
 - b. What is diagenesis?
 - c. Name different periods of Palaeozoic era.
 - d. When did angiosperms first evolved on earth?
 - e. Mention two conditions appropriate for fossilization.
 - f. Name two characteristic fossil genera from upper Gondwana.
 - g. What is Pangaea?
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(2)

Group-B

2. Answer any two questions from the following: **2x4=8**
- Describe two methods used for studying petrified fossil specimens.
 - How is amber formed and what is its importance?
 - Write a brief note on radio carbon dating.
 - How were stromatolites formed? What do they indicate about primitive life? (1+3)

Group -C

3. Answer any one questions of the following: **1x8 = 8**
- Mention the major events that have occurred during the evolution of plants and indicate the approximate geological time frame.
 - Discuss the continental drift theory in light of plate tectonics with diagrams.

Unit – II

[F.M. – 20]

Group-A

1. Answer any four question from the followings: **4x1=4**
- What are the physiological barriers of self-incompatibility with reference to pollen-pistil interactions?
 - What is harmomegasthy?
 - What is meant by pollen load?.
 - Define allergen.

(3)

- What is leptoma?
- Draw the diagrammatic representations of a pollen grain having NPC' 745.
- What are curypalynous taxa? Cite exemples.

Group-B

2. Answer any two questions from the following: **2x4=8**
- Write notes on pollenkitt and viscine threads?
 - Discuss different types of compound apertures seen in pollen grain with suitable sketches.
 - Discuss the role of environmental factors that affect pollination with suitable examples.
 - Write a short note on bee-bread.

Group -C

3. Answer any one questions of the following: **1x8 = 8**
- How will you identify pollen allergens by in-vivo (SPT)?
Why does pollen trigger immune system? **4+4**
 - Illustrate different types of surface ornamentations found in the walls of pollen grains. **8**

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