

B.Sc. 4th Semester (Honours) Examination, 2023 (CBCS)

Subject : Botany

Course : CC-VIII

(Paleobotany and Palynology)

Library

Time: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer *any five* questions from the following: 2×5=10
 - (a) In which type of fossils cellular details of the plant organs are observed? Cite an example.
 - (b) Name the three fundamental types of rocks that constitute the Earth's crust.
 - (c) Define palynomorph. Give an example.
 - (d) Differentiate between a trilete and a monolete spore with suitable sketches.
 - (e) What is pre-ovule? Give an example.
 - (f) Distinguish between lalongate and lolongate pollen grains. Cite examples each.
 - (g) Distinguish between sulcus and ulcus types of apertures.
 - (h) Distinguish between protandry and protogyny. Cite one example each.

2. Answer *any two* questions from the following: 5×2=10
 - (a) How do plant fossils help in stratigraphic deductions? Explain with proper examples.
 - (b) How does paleobotanical evidences help to justify 'continental drift' theory and paleoethnobotany? 2½×2
 - (c) Discuss the adaptations of a flower for zoophilous pollination.
 - (d) Explain the characteristics of climate and flora of different periods of paleozoic era.

3. Answer *any two* questions from the following: 10×2=20
 - (a) How are pollens/spores classified on the basis of number (N), position (P) and character of aperture (C)? Draw a tabular diagram for this. What do you mean by NPC-343? 8+2
 - (b) What are crassinucellate and tenuinucellate ovules? Describe various types of ovules with diagrams and example. Briefly describe megasporogenesis in crassinucellate ovules. 2+5+3
 - (c) Differentiate between autogamy and allogamy. Discuss any two contrivances for cross-pollination with suitable examples and relevant sketches. 2+8
 - (d) State the importance of paleobotany in plant science.