

2022

M.Sc.

2nd Semester Examination

BOTANY

PAPER—202

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Unit 202.1 Palaeobotany

1. Answer any *two* questions. 2×2

(a) What is asthenosphere? Write its significance.

(b) What are guide fossils? Cite examples.

(Turn Over)

(c) Write down the bases of three fold classification of Indian Gondwana.

(d) What is amber? Mention its utilities.

2. Answer any *two* questions. 2×4

(a) Write briefly about the formation of petrified fossils. 4

(b) Write a note on radiocarbon dating of rocks. 4

(c) Briefly discuss about the megafloristics of Pali and Parsora formations of Son valley basin. 2+2

(d) Briefly discuss about the megafloral elements of Rajmahal formation. 4

3. Answer any *one* question. 1×8

(a) What is meant by Indian Gondwana sequence? Discuss the megafloristics of Talchir and Barren Measure / Kulti formations of Damodar valley basin. 2+3+3

- (b) Illustrate the continental drift hypothesis in the light of plate tectonics.

**Unit 201.2 Palynology and
Plant Reproductive Biology**

4. Answer any *two* questions. 2×2
- (a) Differentiate between spores and pollen grains.
- (b) What is meant by aperture of a pollen grain? What is ulcerate grain?
- (c) What are stenopalynous taxa? Cite examples.
- (d) What are herkogamous and dichogamous flowers?
5. Answer any *two* questions. 2×4
- (a) Write different types of compound apertures seen in angiosperm pollen grains.
- (b) Write a short note on extra exinous wall materials found in pollen grains.

(c) What is LO analysis? Write its importance.

(d) Write a brief note on pollination syndrome.

6. Answer any *one* question. 1×8

(a) What is meant by sporoderm? Discuss the sporoderm structure with suitable diagram. Illustrate the types of apiculate structures found in pollen grains. 1+3+4

(b) What is meant by pollinosis/hay-fever? Write down the causes of pollen allergy? Discuss the mechanism of allergic reactions in human system caused by pollen grains. 1+3+4

[*Internal Assessment - 10 Marks*]
