

**M.Sc. 2nd Semester Examination, 2023**

**BOTANY**

PAPER – BOT-202.1 & 202.2

*Full Marks : 40*

*Time : 2 hours*

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

**PAPER – BOT 202.1**

*( Palaeobotany )*

*[ Marks : 20 ]*

1. Answer any *two* of the following : 2 × 2
- (a) What is meant by erosion of rocks ?
- (b) What are ichno fossils ? Cite an example.

(c) Who conceptualize 'continental drift hypothesis' ? Mention the driving forces of plate movements.

(d) Write four megafloreal elements of Rajmahal formation.

2. Answer any *two* of the following : 4 × 2

(a) Write down the factors responsible for fossilization process.

(b) What is coal ball ? Write its importance in the light of palaeobotany study.

(c) Enumerate the megaflorestics of Barakar and Kulti formations of Damodar valley basin. 2 + 2

(d) Briefly discuss the role of plant fossils to correlate among different stratigraphic sequences.

3. Answer any *one* of the following : 8 × 1

(a) Write down the basis of two-fold classification of Indian Gondwana sequence. Discuss the megaflorestics of Tiki and Hartala hill formations of Son valley basin. 2 + 3 + 3

- (b) Discuss the plant life succession through geologic history starting from Precambrian. 8

**PAPER – BOT 202.2**

( *Palynology & Plant Reproductive Biology* )

[ Marks : 20 ]

4. Answer any *two* of the following : 2 × 2
- (a) Differentiate between clavate and pilate type of pollen grains.
  - (b) What is meant by planaperturate pollen grain ?  
Cite an example.
  - (c) Define forensic palynology.
  - (d) Distinguish autogamy and allogamy.
5. Answer any *two* of the following : 4 × 2
- (a) Write a brief note on NPC system of classification of spores/pollen grains.
  - (b) What is sporopollenin ? Write its chemical nature. What does it mean by ubisch body ?

(c) Define melissopalynology. Mention the importance of melissopalynological study.

(d) Discuss in brief the contrivances of cross pollination.

6. Answer any *one* of the following : 8 × 1

(a) What is meant by aperture of a pollen grain ?  
Illustrate different types of simple apertures  
found in angiosperm pollen grains. 2 + 6

(b) What are eurypalynous taxa ? Discuss the  
role of palynology to delimit the different  
taxonomic ranks of angiosperms. 2 + 6

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