

**Total Pages— 5 PG/IIIS/BOT/202.1 & 202.2/25  
(2023-24)**

**M. Sc. 2nd Semester Examination, 2025**

**BOTANY**

**PAPER — BOT-202.1 & 202.2 (2023-24)**

*Full Marks : 50*

*Time : 2 hours*

**Answer all questions**

*The figures in the right hand margin indicate marks*

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

**SECTION — I (PAPER — 202.1)**

*(Palaeobotany)*

*[Marks : 20]*

**GROUP—A**

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

*( Turn Over )*

( 2 )

- (i) What is meant by erosion of rocks ?  
What is its fate ?
- (ii) What is amber ?
- (iii) Name two megafloral elements of  
Rajmahal formation.
- (iv) What are geologic clocks ?

**GROUP – B**

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

- (i) Write down the factors responsible for  
fossilization process. 4
- (ii) What is continental drift hypothesis ?  
Why Atlantic ocean is known as expand-  
ing ocean ? 2 + 2
- (iii) Mention the periods of Mesozoic era.  
Cite one representative megafloral element  
from each period. 2 + 2

( 3 )

- (iv) Write down the important plant mega-fossils of Barakar and Kulti formations. 2 + 2

GROUP – C

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

- (i) What is the basis of three fold classification of Indian Gondwana sequence ? Discuss the megaflorestics of Parsora and Hartala Hill formations of Son valley basin. 2 + 3 + 3

- (ii) What are homotaxial beds ? Briefly discuss the role of plant fossils to correlate among different stratigraphic sequences. 2 + 6

SECTION – II (PAPER – 202.2)

(*Palynology & Pollination Ecology*)

[Marks : 20]

( 4 )

**GROUP - A**

4. Answer any *two* of the following :  $2 \times 2$

(i) What are syncolpate and parasycolpate pollen types ?

(ii) What is pollinosis or hay fever ? Name the Ig responsible for allergic reactions.

(iii) What are two major layers of a pollen grain wall and how do they differ in chemical composition ?

(iv) What is NPC system ? Who proposed it ?

**GROUP - B**

5. Answer any *two* of the following :  $4 \times 2$

(i) Write a note on different types of shape seen in pollen grains.

- (ii) All palynomorphs are microfossils but all microfossils are not palynomorphs. Justify.
- (iii) Write a brief note on forensic palynology.
- (iv) Describe the characteristics of bird pollination syndrome.

**GROUP – C**

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

(i) What are intectate and pectate pollen grains? Diagrammatically discuss different types of elevations found in the walls of the pollen grains.      2 + 6

(ii) Distinguish between stenopalynous and eurypalynous taxa. How palynology helps to delimit the different taxonomic ranks of angiosperms?      2 + 6

**[ Internal Assessment – 10 Marks ]**

