

2019

M.Sc.

2nd Semester Examination

**BOTANY**

Paper - BOT 202

Full Marks : 40

Time : 2 Hours

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

Use separate script for separate units.

**202.1**

**(Palaeobotany)**

**[20 Marks]**

1. Answer any *two* questions from the following :

2×2=4

- (a) What does it mean by Indian Gondwana sequence ?
- (b) What is coal ball ?

*[ Turn Over ]*

- (c) What does it mean by geochronology ?
- (d) Write important factors (only 4) responsible for fossilization processes.

2. Answer any *two* of the following : 4×2=8

- (a) Describe the megafloristics of Rajmahal formation.
- (b) Write down chronologically the periods of a standard Geologic time scale.
- (c) Briefly describe the megafloral elements of Raniganj formation.
- (d) Discuss about the life forms recovered from Bitter-spring formation.

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

- (a) What does it mean by stratigraphy ? Discuss about the criteria for stratigraphic deductions for correlation among stratified rocks. 2+6
- (b) What does it mean by continental drift ? Write down the evidences in favour of continental drift theory. Discuss about the driving forces responsible for plate tectonism. 2+4+2

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202.2

**(Palynology & Plant Reproductive Biology)**

**[20 Marks]**

4. Answer any *two* questions from the following :

2×2=4

- (a) How does pollen grain differ from spore ?
- (b) What is LO-analysis of a pollen grain ?
- (c) Define 'herkogamy' and 'dichogamy' ?
- (d) What are intectate, subtectate and peritectate pollen grains ?

5. Answer any *two* of the following :

4×2

- (a) Write a brief note on Melissopalynology.
- (b) Write about extra exinous wall materials of pollen grains/spores.
- (c) Write different flower morphotypes with respect to pollination.
- (d) Discuss briefly the role of pollen grains in criminal investigations.

[ Turn Over ]

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

(a) What is pollinosis or hay fever ? Illustrate the mechanism of allergic reactions caused by pollen grains in human system. Write some allergenic pollen taxa of West Bengal. 2+4+2

(b) What is sporopollenin ? Mention its main chemical components. Illustrate different types of surface ornamentations seen in pollen grains/spores. 1+2+5

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