

2018

M.Sc. 2nd Semester Examination

BOTANY

PAPER—BOT-202

Subject Code—23

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.

Illustrate the answers wherever necessary.

Use separate Answer-scripts for Unit-I & Unit-II

Unit-I

(Palaeobotany)

[20 Marks]

1. Answer any *four* of the following :

1×4

(a) What is meant by 'dip' of a bed ?

(b) What is asthenosphere ?

(Turn Over)

- (c) What is 'pangaea' ?
- (d) What is meant by 'ichnofossil' ?
- (e) Write two megafloral elements from Parsora Formation.
- (f) What is amber ?
- (g) Write the name of early members discovered from Swartcoppie formation.
- (h) What is meant by principle of superposition of rocks ?

2. Write short notes on any *two* of the following : 3×2

- (a) *Kakabekia umbellata* ;
- (b) Mould-cast fossil types ;
- (c) Megafloristics of Hartala Hill formation ;
- (d) Continental drift.

3. Answer any *one* of the following :

- (a) Who proposed the three fold classification of Indian Gondwana sequence ? What is basis of this 3-fold classification ? Briefly describe the megafloristics of Lower

Gondwana in Damodar valley basin under the perview of 3-fold classification. 1+2+7

- (b) Write down the megafloal succession through Geological time table right from Precambrian to Quaternary.

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Unit-II

(Palynology & Plant Reproductive Biology)

[20 Marks]

4. Answer any *four* of the following :

1×4

- (a) What is meant by 'amb' of a pollen grain ?
- (b) What is meant by unifloral honey ?
- (c) What is meant by ulcerate pollen grain ?
- (d) Cite an example where pollen grains permanently remain in tetrad condition.
- (e) What is pollinia ?
- (f) What is meant by chiropterophily ?

(g) Write the differences between antogamy and allogamy.

(h) What are reagents ?

5. Write short notes on any *two* of the following : 3×2

(a) Palaeopalynology ;

(b) Pollination syndrome ;

(c) Sporopollenin ;

(d) NPC system of classification for spores / pollen grains.

6. Answer any *one* of the following :

(a) What is meant by aperture of a pollen grain ? Illustrate different types of apertures found in spores / pollen grains. 2+8

(b) How does stenopalynous taxa differ from eurypalynous ones ? Discuss the role palynology to delimit the major taxonomic groups of plants. 2+8
