

2017

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.

Illustrate the answers wherever necessary.

Unit—I

(Palaeobotany)

[Marks : 20]

1. Answer any *five* of the following : 5×1

- (a) What is meant by formation in Palaeobotanical Connotation ?
- (b) What is meant by strike of a bed ?

(Turn Over)

- (c) Mention the age of Panchet Formation. Write one megafossil element of Panchet Fm.
- (d) What is index fossil ? Give an example.
- (e) What is coal ball ?
- (f) What is meant by overturned beds ? Cite an example.
- (g) Write the periods of cenozoic era.
- (h) What is meant by geologic clocks ?
2. Write short notes on any *two* of the following : 2×3
- (a) Permineralization ;
- (b) Megafloristics of Rajmahal Formation ;
- (c) Radiocarbon dating ;
- (d) Percambrian life forms of Gunflint Formation and Figtree series Fm.
3. Answer any *one* question of the following : 1×9
- (a) What is meant by continental drift ? Write the major evidences supporting the Wegener's theory of continental drift. Why Atlantic Ocean is known as expanding ocean ?

- (b) What is meant by Gondwana sequence ? Write down the major areas of Gondwana exposures seen in Indian sub-continent. Write the megaflostratics of recovered during Triassic period of Son valley basin.

Unit—II

(Palynology & Plant Reproductive Biology)

[Marks : 20]

4. Answer any *five* of the following : 1×5
- (a) What is meant by radially symmetrical pollen grain ?
 - (b) Differentiate apocolpium from mesocolpium.
 - (c) What is meant by compound aperture of a pollen grain ?
 - (d) What is meant by omniaperturate type of pollen grain ?
 - (e) Differentiate between herkogamy and dichogamy.
 - (f) How geitonogamy differs from xenogamy.
 - (g) What is copropalynolog ?
 - (h) What is spiraperturate pollen grain ?

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

- (a) Melissopalynology ;
- (b) Extraexinous wall materials of pollen & spores ;
- (c) Forensic palynology ;
- (d) LO analysis of pollen grains.

6. Answer any *one* question of the following : 9×1

(a) What is meant by sporoderm ? Describe with suitable illustrations the surface features of sporoderm.

2+7

(b) What is meant by pollinosis or hay-fever ? Illustrate the mechanism of allergic reactions caused by pollen grains in human system. Write some clinical tests that are employed to identify the allergenic pollentaxa from a pollen mixture.

2+5+2