

Total Pages—5

PG/IIIS/BOT - 304/14

M.Sc. 3rd Semester Examination, 2014

BOTANY

PAPER— BOT-304

Full Marks : 40

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

Illustrate the answers wherever necessary

Write the answers to Questions of each Unit in separate books

UNIT – I

(Palaeobotany)

[Marks : 20]

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

(a) What is meant by erosion of rocks ?

(Turn Over)

(2)

- (b) What is 'asthenosphere' ?
- (c) What does it mean by 'chronostratigraphy' ?
- (d) Name one lycophyte characteristic for Barren Measure Formation.
- (e) What is an ichnofossil ?
- (f) What does it mean by Pangaea ?
- (g) Mention two major plates that are present on the earth surface.
- (h) What is a bio-chemical fossil ?

2. Write brief notes on any *two* of the following :

- (i) Precambrian life forms ; $2\frac{1}{2} \times 2$
- (ii) Prebiotic 'secondary Atmosphere' ;
- (iii) Megafloristics of 'Hartala Formation' ; and
- (iv) Factors responsible for fossilization process.

(3)

3. Answer any *one* of the following : 10×1
- (a) What does it mean by stratigraphy ? Describe the steps of stratigraphic deductions. Discuss briefly the importance of plant fossils in stratigraphy. $2 + 5 + 3$
- (b) Discuss about floral succession through the ages (from precambrian to quaternary). 10

UNIT. – II

(*Palynology*)

[*Marks : 20*]

4. Answer any *five* of the following : 1×5
- (a) What is 'syncolpate' grain ?
- (b) What is pollinia ?
- (c) What does it mean by canalliculac regarding the surface feature of a pollen grain ?
- (d) What is syn-orate grain ?

- (e) What are sapro-myophilous flowers ?
- (f) Define xenogamy.
- (g) What are 'eurypalynous' taxa ?
- (h) What is 'viscin-thread' ?
5. Write brief notes on any *two* of the following :
- (i) Dichogamy and Herkogamy ; $2\frac{1}{2} \times 2$
- (ii) Forensic Palynology ;
- (iii) Structure of sporoderm ; and
- (iv) Sporopollenin.
6. Answer any *one* of the following : 10×1
- (a) What is meant by pollinosis or hay-fever ?
How pollen grains cause allergy in human system ? State briefly the clinical tests that are employed to identify the allergenic pollen taxa from a mixture of pollen grains. $2 + 5 + 3$

(5)

(b) What does it mean by the aperture of a pollen grain? With suitable illustrations, briefly describe different type of apertures found in spores and /or pollen grains. 2 + 8
