PG/IIIS/BOT-304/13

M.Sc. 3rd Semester Examination, 2013

BOTANY

PAPER – BOT-304

Full Marks : 40

Time : 2 hours

Answer **all** questions

The figures in the right hand margin indicate marks

Write the answers to questions of each Unit in separate books

UNIT – I

(*Palaeo Botany*)

[*Marks* : 20]

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

(*a*) What is meant by 'Biostratigraphy' ?

(*b*) Mention two megafloral remains of Tiki Formation.

(*c*) What is coal ball ?

(*d*) What do you mean by conformable beds ?

(*e*) What is meant by primary rock ?

(*f*) Mention the periods of Mesozoic era in Chronological Order.

(*g*) What is a 'bed' ?

(*h*) What is meant by 'geologic clock' ?

2. Write brief notes on any *two* of the following : $2\frac{1}{2} \times 2$

(*a*) Radiocarbon dating

(*b*) Megafloristic of Rajmahal Formation

(*c*) Mould-Cast

(*d*) Chemical evolution.

3. Answer any *one* of the following :

(*a*) Classify Lower Gondwana sequence in Damodar Valley Basin. Discuss megafloral succession through the sequence. 2 + 8

(*b*) Explain briefly the Wegener's theory of Continental Drift. Discuss the mechanism of the drift in the light of major plate 'Tectonics'. Mention the plates that are present on the earth. 3 + 5 + 2

UNIT – II

(*Palynology*)

[*Marks* : 20]

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

(*a*) What is a colpate grain ?

(*b*) What do you mean by compound aperture ?

(*c*) Define Forensic Palynology ?

(*d*) What is meant by omniaperturate pollen grain ?

(*e*) Define entomophily.

(*f*) What is Xenogamy ?

(*g*) What is prolate grain ?

(*h*) What is perine ?

5. Write brief notes on any *two* of the following : $2\frac{1}{2} \times 2$

   (*a*) LO analysis of pollen grains.

   (*b*) Melissopalynology

   (*c*) Palaeopalynology

   (*d*) Pollination Syndrome.

6. Answer any *one* of the following :

   (*a*) What is meant by sporoderm ? Describe with suitable illustrations the surface features of sporoderm. 2 + 8

   (*b*) Give a brief account of the significance of spore-pollen morphological features in taxonomic deductions. 10