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End Semester Examination of Semester-I, 2015

Subject : BOTANY (PG)

Paper : 104

Full Marks : 40

Time : 2 Hrs

The figures in the margin indicate the marks corresponding to the question.

Candidates are requested to give their answers in their own word as far as practicable.

Illustrate the answers wherever necessary.

Answer all the questions

Type-A

1. Answer the following question: 8

a) Discuss the structure of various elements of Xylem giving emphasis on their origin and phylogeny.

OR

b) Differentiate between leaf and branch gap. How are the stem nodes distinguished on the basis of their structure? Trace the evolutionary trends in the anatomy of node with example.

Type-B

2. Answer any four (4) questions from the following:

4x4=16

- i) Write the importance of gymnosperms as a source of medicine.
- ii) Mention primitive and advanced characters of Angiospermic wood.
- iii) Describe the megaflorestics of Lower Gondwana in Damodar Valley basin.
- iv) Write short notes on Indian Gondwana.
- v) Mention the processes of Fossilization.
- vi) Why cycadales included under Gymnosperm?
- vii) Mention the distribution pattern of major genera of Gymnosperm in Eastern Himalaya.

Type-C

3. Answer any five (5) questions from the following:

2x5=10

- i) What is meant by dating of rock samples?
- ii) What is coal ball?
- iii) Mention two major plates that are present on the earth surface.
- iv) How sapwood differ from Heartwood.

- v) What are the biological source of petroleum, stacomatolite?
- vi) What are "phyllosperms" and "stachyosperms"?
- vii) Distinguish between solenostele and dictyostele.
- viii) What do you understand by manoxylic and pycnoxylic wood?
- ix) What Xerophytic characters needle leaves of Pinus exhibit?
- x) Why Pteridosperms are known as seed ferns?
- xi) What do you mean by haplocheilic and syndetocheilic stomata?

Type-D

4. Answer any six (6) questions of the following: 1x6=6
- i) What is polyembryony?
 - ii) What do you mean by intraxylary phloem?
 - iii) Mention one angiospermic feature of Gnetales?
 - iv) Why Ginkgo bitoba is called a living fossil?
 - v) Write the Indian distribution of William sonia. Mention its age of occurrence.
 - vi) Write the male fructification on of Lyginopteris.
 - vii) What is periderm?

(4)

viii) Mention the fern character of Cycas spermatozoid.

ix) What is interfascicular Cambium?
