

112

BOTANY

2011

FIRST PAPER

Full Marks : 200

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

Answer any **five** questions

1. Define fertilization. Describe with labelled sketches the post-fertilization changes that take place in the ovule of an angiosperm leading to the formation of a seed.

2+28+10=40

2. What is a stele? Describe with sketches and examples the different types of steles and point out how different steles have evolved.

2+10+20+8=40

3. Give a general account of Bacillariophyceae with special reference to auxospore formation in pennate forms. Mention also the economic importance of the group.

15+15+10=40

4. Mention the salient features of Saccharomyces. Describe the vegetative structure of Saccharomyces. Write about the different methods of reproduction met within Saccharomyces. Mention its economic importance.  $8+10+10+12=40$

5. Describe with neat labelled sketches the gametophytic and sporophytic generation of Anthoceros. Why is the sporophyte of Anthoceros regarded as highly evolved?  $8+12+12+8=40$

6. What is alternation of generation? Illustrate the phenomenon taking Lycopodium as example. Bring out the differences between the spore bearing structures of Lycopodium and Marsilea.  $5+15+20=40$

7. Write notes on :  $10 \times 4 = 40$

(a) Williamsonia Sewardiana

(b) Polyembryony

(c) Development of male gametophyte of Pinus

(d) Male flowers of Gnetum

8. Define natural and phylogenetic system of classification. Who proposed these two systems? Give an outline of natural system of classification. 10+5+25=40

Or

Write notes on : 10×4=40

- (a) Merits and demerits of Linnaeus system of classification
- (b) Economic importance of Poaceae
- (c) Advance characters of Orchidaceae
- (d) Pollination mechanisms in Lamiaceae

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