

BOT–503**Gymnosperms, Taxonomy of Angiosperms and
Anatomy****M. Sc. BOTANY (MSCBOT–12/13/16)****First Year, Examination, 2017****Time : 3 Hours****Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A**(Long Answer Type Questions)**

Note : Section ‘A’ contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. Describe detailed comparative account of female gametophyte of cycadales and gnetales.
2. Give detailed account of system of classification proposed by Bentham and Hooker upto order. Also discuss the merits and demerits of the system. Why this system is popularly used by taxonomists ?
3. What do you understand by Biodiversity ? Give detailed account of Alpha, Beta and Gamma biodiversity. Also give examples of in-situ conservational efforts of Biodiversity.

4. What do you understand by shoot apical meristem ? Give various theories to understand the shoot apical meristem.

Section-B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. Give detailed account of distribution of Gymnosperms in Uttarakhand.
2. Describe any *two* fossil gymnosperms you have studied.
3. What do you understand by Chemotaxonomy ? Give detailed account of utilization of chemical features of plants in classification of Angiosperms.
4. Describe the various steps of preparation of herbarium.
5. Give outline of classification system proposed by Takhtajan.
6. Describe characteristic features of 'Amentiferae'.
7. Differentiate between Xylem and Phloem tissue.
8. Write short notes on the following :
 - (a) Parenchyma tissue
 - (b) Casparian strips

Section-C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

Fill in the blanks :

1. *Ginkgo biloba* is

[3]

2. Rajaji National Park is known for
3. Fruit of family Cucurbitaceae is
4. What do you understand by bicollateral vascular bundle ?
5. BSI stands for

Indicate whether the following statements are True *or* False :

6. Lycopodium is a living fossil. (True/False)
7. Zoo is a method of in-situ conservation. (True/False)
8. Sieve tubes are found in phloem of Gymnosperms.
(True/False)
9. Birbal Sahni Institute of Palaeobotany is located at Patna. (True/False)
10. Family Ranunculaceae have apocarpous ovary.
(True/False)

