

B.Sc. (Part-I) Semester-II Examination

BOTANY

Gymnosperm, Morphology of Angiosperm and Utilization of Plants

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) There are **SEVEN** questions in all.

(2) Question No.1 is compulsory and carries **8** marks.

(3) Question number **2** to **7** carry equal marks.

(4) Draw neat and well labelled diagram wherever necessary.

1. (A) Fill in the blanks :-

(i) The type of modification of root in carrot is _____. ½

(ii) Gnetum belongs to order _____. ½

(iii) Botanical name of neem is _____. ½

(iv) Pollination through water is _____. ½

(B) Choose the correct alternatives :-

(v) Prop root is modified for :-

- | | | |
|------------------|------------------------------|---|
| (a) Food storage | (b) Support | |
| (c) Respiration | (d) Vegetative reproduction. | ½ |

(vi) Verticillaster inflorescence is present in the family :-

- | | | |
|-----------------|---------------------|---|
| (a) Verbenaceae | (b) Apocynaceae | |
| (c) Lamiaceae | (d) Asclepiadaceae. | ½ |

(vii) The Botanical name of cotton is :-

- | | | |
|-------------------------|-----------------------|---|
| (a) Gossypium herbaceum | (b) Triticum aestivum | |
| (c) Oryza sativa | (d) Zea mays. | ½ |

(viii) The napiform root is modification for :-

- | | | |
|------------------|----------------|---|
| (a) Food storage | (b) Support | |
| (c) Respiration | (d) Absorption | ½ |

(C) Answer in **one** sentence :-

(ix) Define annuals. 1

(x) Define phyllotaxy. 1

(xi) Botanical name of Tulasi plant. 1

(xii) Fleshy simple fruit in citrus is known as. 1

2. Describe the process of plant fossilisation and types of fossil 12

OR

(a) Describe anatomy of stem *Lyginopteris oldhamia*. 6

(b) L.S. ovule of *Bennittites*. 6

3. Comments on :
- (c) T.S pinus needle (only diagram). 4
 - (d) Male cone in gnetum. 4
 - (e) Affinities of gymnosperm with pteridophyte. 4
- OR**
- (f) T.S *Gnetum* stem showing primary structure. 4
 - (g) L.S ovule of pinus (only diagram). 4
 - (h) Economic importance of gymnosperm. 4
4. Explain the following :
- (i) Rhizome 4
 - (j) Alternate phyllotaxy. 4
 - (k) Stilt root 4
- OR**
- (l) Stem tuber 4
 - (m) Opposite phyllotaxy 4
 - (n) Parellel venation 4
5. Comments on :-
- (o) Cyathium inflorescence 4
 - (p) Self pollination 4
 - (q) Cohesion of stamens 4
- OR**
- (r) Capitulum inflorescence 4
 - (s) Axile placentation 4
 - (t) Cruciform corolla 4
6. What is fruit? Describe morphological types of simple dry dehiscent fruits (any four). 12
- OR**
- (u) Describe varieties and economic importance of cotton. 6
 - (v) Describe varieties and economic importance of ground nut. 6
7. Comments on :
- (w) Medicinal uses of *Emblica officinalis*. 4
 - (x) Economic importance of *Eucalyptus*. 4
 - (y) Medicinal uses of *Azadirachta indica*. 4
- OR**
- (z) Economic importance of clove. 4
 - (a) Medicinal uses of *Aloe Vera*. 4
 - (b) Medicinal uses of ocimum sanctum. 4