

(i) Printed Pages : 7]

Roll No. ....

(ii) Questions : 9]

Sub. Code : 

0	1	5	4
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Exam. Code : 

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**B.A./B.Sc. (General) 2nd Semester  
Examination**

**1047**

**BOTANY**

**(Plant Diversity-II)**

**Paper : A**

**Time : 3 Hours]**

**[Max. Marks : 36**

**Note :-** (i) Attempt *five* questions in all.

(ii) Question No. 1 is compulsory.

(iii) Attempt *four* more questions selecting *one* from each Unit (Unit I, II, III, IV).

(iv) Draw well labelled diagrams wherever necessary.

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( 1 )

Turn Over

1. Compulsory :

(A) Choose the correct option.

(i) Pyrenoids are found associated with chloroplasts of :

- (a) *Anthoceros*                      (b) *Funaria*  
(c) *Marchantia*                      (d) *Riccia*

(ii) "Scouring rushes" is the common name of :

- (a) *Selaginella*                      (b) *Equisetum*  
(c) *Anthoceros*                      (d) *Funaria*

(iii) In which of the following plants independent sporophyte and gametophyte is present ?

- (a) Algae                                  (b) Fungi  
(c) Bryophytes                          (d) Pteridophytes



(iv) In the life cycle of a moss which of the generation is dominant ?

- (a) Haploid gametophytes
- (b) Diploid gametophyte
- (c) Haploid sporophyte
- (d) Diploid sporophyte

(v) In *Funaria*, that reduction division takes place in the :

- (a) antheridium      (b) archegonium
- (c) capsule          (d) zygote

(vi) Peltate disc is characteristic feature of strobilus of which pteridophyte ?

- (a) *Equisetum*      (b) *Selaginella*
- (c) *Psilotum*        (d) *Rhynia*          6×1=6



(B) Fill in the blanks :

- (i) Dehiscence of moss capsule takes place by the ..... movements of peristome teeth.
- (ii) Antherozoids of *Marchantia* are .....
- (iii) When two kinds of sex organs are borne on separate branches of the same plant, such are called ..... mosses.
- (iv) Heterospory is considered to be a pre-requisite for .....
- (v) Aerial branches of *Rhynia* bear .....
- (vi) *Anthoceros* shows ..... colonies in the thallus .....

6×1=6

### Unit-I

2. (a) Describe the life history of *Marchantia* with the help of series of diagrams only (No description asked) .....

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( 4 )



- (b) Explain mechanism of spore dispersal in the capsule of *Riccia*.

4,2

3. Write notes on any *two* of the following :

- (a) Gemma cup and gemmae of *Marchantia*

- (b) Archegoniophore of *Marchantia*

- (c) Alternation of generation .....

3,3

## Unit-II

4. (a) Describe sex organs of *Funaria* .....

4

- (b) Draw V. S. Thallus of *Anthoceros* showing antheridia .....

2

5. Write notes on any *two* of the following :

- (a) Justify the statement "*Anthoceros* is a synthetic genus."

- (b) Vegetative reproduction in *Funaria*
- (c) Draw V. S. of *Anthoceros* thallus and write the significance of mucilage cavities ..... 3,3

### Unit-III

- 6. (a) Describe the internal structure of *Rhynia* (= *Aglaophyton*) stem and sporangium.
- (b) Draw well labelled diagrams of mature megagametophyte in *Selaginella*. 3,3
- 7. Write notes on any *two* of the following :
  - (a) Morphological nature of rhizophore of *Selaginella*
  - (b) Seed habit in *Selaginella*
  - (c) T. S. root of *Selaginella* 3,3

### Unit-IV

- 8. Write notes on any *two* of the following :
  - (a) Dehiscence of sporangium in *Pteris*
  - (b) Structure of antherozoid in *Equisetum*
  - (c) Strobilus of *Equisetum* 3,3



9. Draw well labelled diagrams of any *two* of the following :

(a) T. S. aerial stem (internode) of *Equisetum*

(b) T. S. sporophyll of *Pteris*

(c) V. S. prothallus of *Pteris*

3,3