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**5 SEM TDC BOT M 1**

**2 0 1 7**

( November )

**BOTANY**

( Major )

Course : 501

**( Development and Reproduction of Angiosperm )**

*Full Marks : 48*

*Pass Marks : 19/14*

*Time : 2 hours*

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

1. (a) Answer the following as directed :  $1 \times 5 = 5$

(i) The balloon-like growth of parenchyma in the lumen of a vessel is known as \_\_\_\_\_.

( Fill in the blank )

(ii) Dermatogen tissue is developed into xylem/cortex/epidermis.

( Choose the correct one )

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(iii) The chemical substance deposited to the cell walls of cork cell.

( Express in one word )

(iv) Typical 8-nucleate embryo sac is called \_\_\_\_\_ type.

( Fill in the blank )

(v) After fertilization, the seed coats of seeds develop from chalaza/ integuments/embryo sac.

( Choose the correct one )

(b) Write precise notes on the following :

$$2+2+2\frac{1}{2}+2\frac{1}{2}=9$$

(i) Annual rings

(ii) Characters of meristematic tissue

(iii) Polyembryony and its significance

(iv) Significance of double fertilization

2. Answer/Write explanatory notes on *either*

[ (a) and (b) ] or [ (c) and (d) ] :  $5 \times 2 = 10$

(a) Post-fertilization changes within the ovule of an angiosperm

(b) Root-stem transition of vascular tissue in plants

(c) Helobial type of endosperm formation in angiosperm

(d) Periderm and its function

( 3 )

3. What is the difference between a tissue and tissue system? Describe in brief the epidermal tissue system with special reference to epidermal outgrowth. Draw the diagram wherever necessary.  $2+8+2=12$

Or

Compare the following :  $4 \times 3 = 12$

- (a) Tracheids and vessels
  - (b) Anatomy of  $C_3$  and  $C_4$  plants
  - (c) Dicot and monocot roots
4. What do you mean by megasporogenesis? Describe the development of tetrasporic type of embryo sac with suitable examples. Draw diagram wherever necessary.  $2+8+2=12$

Or

Write accounts on the following :  $4 \times 3 = 12$

- (a) Development of female gametophyte
- (b) Practical application of parthenocarpy
- (c) Cellular type endosperm

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