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5 SEM TDC BOT M 1

2017

(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 : 1×5=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)

(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+2½+2½=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)*] : 5×2=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

(Continued)

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 : 4×3=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 : 4×3=12

(a) Development of female gametophyte

(b) Practical application of parthenocarpy

(c) Cellular type endosperm

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