5 SEM TDC BOT M 1

2 0 1 4

(November)

BOTANY

(Major)

Course : 501

**(Development and Reproduction
of Angiosperm)**

Full Marks : 48
Pass Marks : 19

Time : 2 hours

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

1. Answer the following as directed :   1×5=5

    (a) In the shoot meristem, protoderm gives
        rise to pith/pericycle/phloem/epidermis.
                    (Choose the correct answer)

    (b) A central cylinder containing vascular
        tissue.   (Express in one word)

    (c) Collenchyma often contains chlorophyll.
                    (Write true or false)

(Turn Over)

    (d) The part of embryonic axis just below the cotyledons. (Express in one word)

    (e) Arrangement of nuclei in normal dicot embryo sac is

        (i) 3+3+2

        (ii) 2+4÷2

        (iii) 3+2+3

        (iv) 2+3+3   (Choose the correct one)

2. Write precisely on the following :

    (a) Importance of meristem   2

    (b) Leaf traces and leaf gaps   2

    (c) Double fertilization   2½

    (d) Apomixis and its importance   2½

3. Answer/Write explanatory notes on *either* [*(a)* and *(b)*] *or* [*(c)* and *(d)*] :

    (a) Conducting tissues of plant and their structures and functions   1+2+2=5

    (b) Development of endosperm and its significance   4+1=5

    (c) What are proto- and meta-xylem? How are they related to the endarch and exarch conditions?   1+4=5

    (d) Development of embryo in a dicot plant   5

        (Continued)

4. Describe the structure, function and evolutionary significance of secondary xylem parenchyma. Draw the diagram wherever necessary.   5½+4½+2=12

Or

Compare the following :

(a) Apical, lateral and intercalary meristem   3

(b) Fascicular and interfascicular cambium   2

(c) Spring wood and autumn wood   3½

(d) Tunica and corpus   3½

5. How is triploid formed in angiospermic plant? Describe the different types of endosperm with diagram. Write about the haustorial structure of endosperm.   1+9+2=12

Or

What do you mean by megasporogenesis? Describe the development of biosporic type of embryo sac with suitable examples. How many nuclei are formed in Penae and Fritillaria type of embryo sac?   2+8+2=12

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