Total No. of Printed Pages—3

5 SEM TDC BOT M 1

2013

(November)

BOTANY

(Major)

Course : 501

(Development and Reproduction in Angiosperms)

Full Marks : 48
Pass Marks : 19

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer as directed : 1×5=5

(a) Large vessels and tracheids are produced in summer/spring/winter/rainy season.

(Choose the right answer)

(b) The stipe of tissue present between endodermis and vascular bundle

(Express in one word)

(c) Multiple epidermis is found in ——.

(Fill up the gap)

(d) During fertilisation, one of the male gamete fuses with —— to accomplish triple fusion.

(Fill up the gap)

(e) Type of endosperm formation in which the primary endosperm nucleus undergoes free nuclear division without immediate wall formation

(Express in one word)

2. Give brief answers to the following :

(a) Name the types of permanent tissues with examples. 2

(b) Where lies the basic difference in the anatomy of C_3 and C_4 plants? 2

(c) Define polyembryony and state its significance. 1+1½=2½

(d) Draw the diagram of normal (polygonum) type of embryo sac and label its parts. 1½+1=2½

3. Write explanatory notes on *either* [*(a)* and *(b)*] *or* [*(c)* and *(d)*] : 5×2=10

(a) Anatomico-physiological consideration of photosynthetic tissue system

(b) Apomixis and its types

(c) Classification of meristematic tissues with their functions

(d) Development of helobial type of endosperm

4. Give an illustrated account on different types of root-stem transition of vascular tissues in plants. Also, state how cambium ring is formed. 9+3=12

Or

What do you mean by anomalous secondary growth in thickness? With suitable sketches, describe the phenomenon in a dicotyledonous stem you have studied. 3+6+3=12

5. What is meant by palynology? Discuss in detail the morphology, viability and embryological features of pollen grains. Give diagrams and examples. 2+6+2+2=12

Or

What do you mean by microsporogenesis? Describe briefly the development of male gametophyte in angiosperms with diagrams. 1+7+4=12

★★★