

**5 SEM TDC BOT M 1**

**2019**

( 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) Presence of Casparian strip is characteristic feature of epidermis/pericycle/exodermis/endodermis.

( Choose the correct answer )

(ii) Tunica Corpus theory was proposed by \_\_\_\_.

( Fill in the blank )

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(iii) Quiescent centre is present in root tip/shoot tip/flower tip/leaf tip.

( Choose the correct answer )

(iv) When the ovary develops into the fruit without fertilization of the ovules, the phenomenon is called \_\_\_\_\_.

( Fill in the blank )

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

( Fill in the blank )

(b) Write briefly on the following :  $2+2+2+3=9$

(i) Epidermal outgrowth and its function

(ii) Collateral vascular bundle

(iii) Polyembryony

(iv) Significance of double-fertilization

2. Write on either [(a) and (b)] or [(c) and (d)] :

$5 \times 2 = 10$

(a) Bisporic type of embryo sac with example

(b) Classification of meristematic tissues with their function

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

(d) Ground tissue system

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3. Give an 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

4. 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

Write short accounts of the following : 4×3=12

- (a) Nuclear-type endosperm
- (b) Development of female gametophyte
- (c) Apomixis

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