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5 SEM TDC BOTH (CBCS) C 11

2021

(Held in January/February, 2022)

BOTANY

(Core)

Paper : C–11

(Reproductive Biology of Angiosperms)

Full Marks : 53
Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. *(a)* Choose the correct answer of the following : 1×3=3

(i) In angiosperms the endosperms is

(1) triploid (3n)

(2) diploid (2n)

(3) haploid (n)

(4) None of the above

(ii) When the body of the ovule, embryo sac, micropyle and funicle, all lie in one vertical plane the ovule is

(1) anatropous

(2) orthotropous

(3) amphitropous

(4) campylotropous

(iii) The process of double fertilization (triple fusion) was discovered by

(1) Nawaschin

(2) Leeuwenhoek

(3) Strasburger

(4) Hofmeister

(b) Fill in the blanks of the following : 1×2=2

(i) Finger-like projections present in synergids are called _____.

(ii) Typical 8-nucleate embryo sac is called _____.

2. Write precise notes on the following : 4×3=12

(a) Double fertilization and its significance

(b) NPC system

(c) Apomixis

3. What is microspore? Describe the formation of microspores within the microsporangium. Draw diagram where necessary. 2+8+2=12

Or

Answer/Write explanatory note of the following : 6+6=12

(a) "The flower is equivalent to a modified shoot." Justify the statement with reasons.

(b) Polyembryony and its significance

4. What do you mean by embryogenesis? Describe the stages of development of a typical dicot embryo giving necessary diagram. 2+8+2=12

Or

Write notes of the following : 4×3=12

(a) Monosporic type of embryo sac

(b) Parthenocarpy and its significance

(c) Difference between dicot and monocot embryo

5. What is self-incompatibility? Describe about the homomorphic and heteromorphic self-incompatibility. What are the methods to overcome self-incompatibility? 2+6+4=12

Or

Describe the different types of contrivances of cross-pollination giving example in each case. Why nature prefers cross-pollination? 8+4=12

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