2022

(Held in 2023)

BOTANY

Paper : BOTHC3056

(Anatomy of Angiosperms)

Full Marks : 60
Pass Marks : 24

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Choose the correct answer of the following : 1×5=5

(a) Vascular bundles in *Cucurbita* stem are

(i) closed, conjoint, endarch

(ii) open, conjoint, endarch

(iii) closed, conjoint, exarch

(iv) open, conjoint, exarch

(b) Nectaries of a flower are

(i) sieve cells

(ii) internal secretory glands

(iii) external secretory glands

(iv) glandular hairs

(c) The pith of plant is developed from the

(i) cambium

(ii) plerome

(iii) quiescent centre

(iv) periblem

(d) 'Air cavity' of *Eichhornia* is a modification of

(i) collenchyma tissue

(ii) sclerenchyma tissue

(iii) companion cells

(iv) parenchyma tissue

(e) The fragrance of flowers is due to the presence of

(i) osmophor glands

(ii) nectar glands

(iii) hydathodes

(iv) laticiferous glands

2. Answer the following questions in short : 2×5=10

(a) Mention two functions of stomata.

(b) State the importance of sclerenchyma tissue.

(c) What is plasmodesmata?

(d) What is Kranz anatomy?

(e) Define sap wood and heart wood.

3. Write notes on the following (any *five*) : 5×5=25

(a) Role of anatomy in pharmacognosy

(b) Difference between collateral and radial vascular bundle

(c) Epidermal tissue system

(d) Origin of cambium and its functions

(e) Types of stomata among dicotyledonous plants

(f) *Korper-Kappe* theory

(g) Secretory glands of plants

4. Answer any *two* of the following questions : 10×2=20

(a) Briefly discuss the theories of structural development and differentiation of shoot apex in flowering plants. 10

(b) Give a concise note on anatomical adaptation of free floating and submerged aquatic plants. 5+5=10

(c) What is secondary growth? Discuss briefly how secondary growth takes place in dicot woody plants. 2+8=10

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