(e) Write briefly the principal changes that occur in the sapwood during its progression into heartwood? How would you differentiate the former from the latter? Which of these two is economically more important?

5+4+1=10

(f) What do you mean by Phyllode? Describe briefly about the Phyllode theory, and its significance.

2+7+1=10

Total number of printed pages–4

3 (Sem–3/CBCS) BOT HC 1

2023

BOTANY

(Honours Core)

Paper : BOT–HC–3016

(Morphology and Anatomy of Angiosperm)

Full Marks : 60

Time : Three hours

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

1. Answer the following : 1×7=7

(a) Which tissue of the leaf contains chloroplast?

(b) What is laticifer?

(c) What is quiescent centre?

(d) Write the name of flattened petiole of Australian *Acacia*.

Contd.

(e) Write the types of vascular bundle in dicot root.

(f) When anthers are united but the filaments remain free the condition is called _____. *(Fill up the gap)*

(g) The only living element in xylem tissue is _____. *(Fill up the gap)*

2. Answer the following very shortly : 2×4=8

(a) Schizocarpic fruits.

(b) Tyloses and Tylosoid.

(c) Distinguish between Tracheid and Vessels.

(d) Spikelet.

3. Answer ***any three*** of the following : 5×3=15

(a) Distinguish between internal structure of Dicot and Monocot stem.

(b) Cohesion of stamen.

(c) Anatomical and physiological adaptations of Xerophytes.

(d) Distinguish between cambium and Cork cambium.

(e) Distinguish between Racemose and Cymose inflorescences.

4. Answer the following questions : ***(any three)*** 10×3=30

(a) What is Secondary Growth? Describe in detail about Secondary Growth in dicotyledonous stem with neat diagram. 2+8=10

(b) What is the difference between tissue and tissue system? Describe the epidermal tissue system with special reference to epidermal outgrowths. 1+9=10

(c) Define permanent tissues. How are they classified? Describe different types of simple tissues with neat diagram. 2+2+6=10

(d) Describe briefly about the role of anatomy in solving the problems of plant systematics.