

**2020**

*Time : As in Programme*

*Full Marks : 60*

*The figures in the right-hand margin indicate marks.*

*Answer from **all** the Parts as directed.*

**Part – I**

1. Answer the following questions (fill in the blanks / **one word answer**) (Any **four**) :  $2 \times 4 = 8$
- (a) \_\_\_\_\_ contain calcium carbonate deposition giving the appearance of a grape bunch.
  - (b) The vascular bundles are scattered in \_\_\_\_\_.
  - (c) Who proposed the 'Histogen Theory' for the first time ?
  - (d) Generally lateral roots arise from the cells of \_\_\_\_\_.
  - (e) Isolated sclereids are known as \_\_\_\_\_.
  - (f) Who is known as the father to plant anatomy ?

**Part – II**

2. Answer any **four** questions within two or three sentences each :  $3 \times 4 = 12$
- (a) Differentiate between collenchyma and sclerenchyma.
  - (b) What are the different types of meristematic tissue according to their position in the plant body ?
  - (c) Write three causes of anomalous secondary growth.
  - (d) Write three applications of dendro-chronology.
  - (e) What are osmophores ?
  - (f) Write three functions of plasmodesmata.
  - (g) Write three important features of endodermis.
  - (h) What is rhytidome ?

**Part – III**

3. Answer any **four** questions within **50** words each .  $4 \times 4 = 16$
- (a) What are the functions of transfer cells ?
  - (b) Differentiate between adcrustation and incrustation in plant cells.

- (c) Write down the composition of periderm.
- (d) What are trichomes ? Mention their types with examples.
- (e) What are different types of starch grains found in plant cells ?
- (f) Give a brief note on epicuticular waxes.
- (g) Write about conjoint vascular bundle.
- (h) What are different types of cavities found in plants ?

#### Part – IV

Answer the following questions (Any three) :

8×3 = 24

- 4. Give an account on different types of complex tissues found in plants.

**OR**

Write notes on the following :

- (a) Application of plant anatomy in systematics
  - (b) Pits
5. Define the discuss Root stem transition in plants.

**OR**

HF – 93/4

( 3 )

( Turn over )

Write notes on the following :

- (a) Kranz anatomy
  - (b) Structure and function of vascular cambium
6. Describe the structure and organization of root apical meristem.

**OR**

What is wood ? Describe different types of wood.

- 7. Describe anatomical adaptations of Xerophytes with suitable examples and diagrams.

**OR**

⊕

What are the mechanical needs of the plants ? Discuss the various principles of distribution of mechanical tissue.

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HF – 93/4 (8,300)

( 4 ) +3-IIIIS-CBCS-Sc.(H) —  
Bot (C – 5)