

**U.G. 1st Semester Examination - 2021****BOTANY****[HONOURS]****Course Code : BOT-H-CC-T-02****(Plant Morphology and Anatomy)**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

2×5=10

- Distinguish between apoplast and symplast.
- What is winged petiole? Cite example.
- Distinguish between simple and compound leaf.
- What is pappus? What role it plays?
- Distinguish between bordered and simple pit.
- Distinguish between shoot and root apex.
- Why are the cells of permanent tissue called totipotent?
- What is mass meristem?

*[Turn over]*2. Answer any **two** of the following questions:

5×2=10

- Briefly define the following types of inflorescence with suitable diagram: 2½+2½
  - Spadix*
  - Capitulum*
- Mention the major differences between histogen and tunica-corpus theory. 5
- What is amphisarca? Add a note on different types of aggregate fruit. 1+4=5
- How do Cytodifferentiation of tracheary elements and sieve elements take place? 5

3. Answer any **two** of the following questions:

10×2=20

- Discuss the scope of plant anatomy in systematics. 10
- Distinguish between primary and secondary phloem. How does secondary growth take place in *Strychnos* and *Tinospora*? 4+3+3=10
- Discuss the pattern of different phyllotaxis in angiosperm. How is calyx modified in flowering plants? 5+5=10
- Distinguish between periderm and polyderm. Mention the features of sapwood and heartwood. 5+5=10