

U.G. 3rd Semester Examination - 2021

BOTANY

[HONOURS]

Generic Elective Course (GE)

Course Code : BOT-H-GE-T-03

(Plant Cell, Anatomy and Embryology)

Full Marks : 40

Time : 2 $\frac{1}{2}$ 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: 2×5=10
- a) Why is lysosome called suicidal bag?
 - b) Mention one example which clearly demonstrates that characters of individual are controlled by nucleus.
 - c) Why are pachytene studies very useful for the study for the study of chromosome morphology?
 - d) What is cork cambium?
 - e) What is polyembryony?
 - f) What is double fertilization?

- g) What is Apomixis?
- h) What are SER and RER?

2. Distinguish between the following (any **two**):

5×2=10

- a) CpDNA and mtDNA
- b) Root apex and Shoot apex
- c) Heartwood and Sapwood
- d) A-DNA and Z-DNA

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

- a) Describe in brief the process of cell cycle.
- b) Describe the structure of a mature embryo with proper diagram.
- c) Describe different types of endosperm.
- d) Compare prokaryotic and eukaryotic protein synthesis.
