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SECOND YEAR (SYBSc minor)
BOT24601: Principles of Plant Science
(Semester IV)

Program: BSc
Program Specific: BSc General
Course Type: Minor
Paper:

Credits: 2
Time: 2 Hours
Max. Marks: 30
SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labelled diagram wherever necessary.

Q1) Answer the following

[5 X 1 = 5]

- a) Interpret cell cycle
- b) Define cell theory
- c) Correlate totipotency with plant tissue culture
- d) Sketch nucleotide
- e) State the function of ribosome

Q2) Answer the following (Attempt any 5/7)

[5 X 2 = 10]

- a) Write functions of tRNA
- b) Compare diffusion and osmosis
- c) Give two properties of mRNA
- d) Explain Z form of DNA
- e) Justify the importance of metaphase
- f) List the growth regulators used in plant tissue culture
- g) Deduce the importance of plant physiology

Q3) Answer the following/Write short notes on following (Attempt any 2/4)

[2 X 5 = 10]

- a) Analyze the structure of plant cell
- b) Compare and contrast Mt DNA and Cp DNA
- c) Review the types of meristem tissue
- d) Construct the model which describes plant membrane

Q4) Answer the following (Attempt any 1/2)

[5 X 1 = 5]

- a) Discuss the applications of Plant tissue culture techniques
- b) Explain the Watson and Crick model of DNA
