

M.Sc.(Botany) (CBCS Pattern) Sem-III  
**Course Code PSCBOTT10 - Paper-X : Cell and Molecular Biology-II**

P. Pages : 1

Time : Three Hours



**GUG/W/22/11242**

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw well labelled diagram whenever necessary.

**1.** Write in detail about transcription in prokaryotic and eukaryotic cell. **16**

**OR**

Write notes on:

- a) Plant promoters. **8**  
b) Structure and role of tRNA. **8**

**2.** Write in detail about regulation of gene expression in prokaryotes And eukaryotes. **16**

**OR**

Write notes on:

- a) Protein targeting to plastids. **8**  
b) Fine structure of gene. **8**

**3.** Write in detail about genetic markers and construction of Genetic map. **16**

**OR**

Write notes on:

- a) Chromosomal mapping. **8**  
b) Transformation. **8**

**4.** Write in detail about control mechanism of cell cycle, add write note on Role of cyclin and cyclin dependent kinase. **16**

**OR**

Write notes on:

- a) Programmed cell death. **8**  
b) GISH **8**

**5.** Write short notes on:  
a) mRNA transport **4**  
b) RNA splicing **4**  
c) Genetic markers **4**  
d) Calcium calmodulin cascades **4**

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