

B.Sc. (With Credits)-Regular-Semester 2012 Sem IV  
**B.Sc 2442 - Botany-II (Molecular Biology and Biotechnology) (Paper- II)**

P. Pages : 2

Time : Three Hours



**GUG/W/16/5597**

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Illustrate your answers with suitable examples and draw well labelled diagrams wherever necessary.

1. What is DNA? Describe the Griffith experiment to prove as a genetic material. 10

**OR**

a) Translation. 5

b) Genetic code. 5

2. What is Genetic Engineering? Write about tools and techniques of recombinant DNA technology. 10

**OR**

a) Somatic embryogenesis. 5

b) Methods of sterilization. 5

3. Write short notes on

a) Z – DNA 2½

b) Satellite DNA 2½

c) Jumping gene 2½

d) Protoplast – Culture 2½

**OR**

e) B – DNA 2½

f) Repetitive DNA 2½

g) Restriction Enzyme 2½

h) M S Medium 2½

4. Write short notes on

a) A – DNA 2½

b) Wobble hypothesis 2½

c) C – DNA Library 2½

d) White Medium 2½

**OR**

e) Nucleosome Model 2½

f) RNA Processing 2½

g) Plasmids 2½

h) Basic aspects of plant tissue culture 2½

**5.** Write **any ten** in one or two lines only. (Diagrams are not necessary.)

a) Ribose sugar

b) r – RNA

c) Pyrimidines

d) Triplet code

e) Nonsense codon

f) Transcription

g) Ligase

h) Bacteriophage

i) Lac – operon

j) Explant

k) Callus

l) Totipotency

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