

B.Sc. (Part- II) (With Credits)-Regular-Semester 2012 Sem IV  
**B.Sc 2432 - Zoology-II (Genetics and Genetic Engineering)**

**Paper- II**

P. Pages : 2

Time : Three Hours



**GUG/W/16/5617**

Max. Marks : 50

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- Notes : 1. All questions are compulsory.  
2. All questions carry equal marks.  
3. Draw well labelled diagrams wherever necessary.

1. Describe the structure of DNA. **10**

**OR**

- a) Gynandromorphs.  
b) Base pair substitution.

2. Give a detail account on Eugenics. **10**

**OR**

- a) Monoclonal antibody.  
b) Production of Insulin.

3. Attempt the following. **10**

- a) m-RNA  
b) Mutation due to UV radiation.  
c) Recombinant DNA technology.  
d) Transduction

**OR**

- e) Wobble hypothesis.  
f) Milk factor transmission in mice.  
g) DNA-RNA hybridization.  
h) Transgenesis.

4. Attempt the following. **10**

- a) Non sense codon.  
b) Frame shift mutation.

- c) PBR322.
- d) Insertion of DNA in plasmid.

**OR**

- e) Lac operon model.
- f) Mutation due to x-ray.
- g) Yeast artificial chromosome.
- h) Use of linker molecule for joining DNA to vector.

**5.** Write four or five lines on each of the following **any ten**.

**10**

- i) Non-genetic RNA.
- ii) Codon
- iii) Recon
- iv) Paramecin
- v) Intersexes
- vi) Silent mutation
- vii) Phagemids
- viii) Cosmids
- ix) DNA ligases
- x) Immunoglobulin G
- xi) Transfection
- xii) Transformation

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