



GV – 51

B.Sc. (Semester – V) Examination, October/November 2016
BOTANY (Paper – XI)
Plant Biochemistry and Molecular Biology

Duration : 2 Hours

Max. Marks : 80

Instructions : 1) **All questions are compulsory.**

2) **Answer to Question 1 and 2 should be brief.**

3) **Figures to the right indicate maximum marks.**

4) **Draw neat labeled diagrams wherever necessary.**

1. Answer **any four** of the following :

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- i) What is glycobiology ? State its role.
- ii) Write a note on PUFA.
- iii) Explain the A and Z forms of DNA.
- iv) What are amino acids ? Explain essential and non-essential amino acids.
- v) Write a note on DNA polymerase.
- vi) What is vitamin B-complex ? State their functions.

2. Answer **any four** of the following :

16

- i) Write a note on plant lectins.
- ii) State the functions of proteins.
- iii) Write a note on liposomes.
- iv) Explain "DNA recombination".
- v) What are peptide bond and polypeptide chain ?
- vi) Write a note on Edible vaccines.

3. A) What are carbohydrates ? Explain the process of degradation of starch.

6

OR

A) Write a note on " α -oxidation of fatty acids".

B) Discuss the chemistry, biological function and occurrence of Vitamin D.

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4. A) Write a note on immunoglobulins.

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OR

- A) Explain the process of denaturation and renaturation of DNA.

- B) Give an account of the structure of chromatin.

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5. A) Explain the process of translation during protein synthesis.

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OR

- A) Write a note on mRNA stability.

- B) Explain "Gene organization in Prokaryotes".

6

6. A) Write a note on post-translational modification of proteins.

6

OR

- A) What is RNA silencing ? Explain.

- B) Describe the operon concept.

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