

(i) Printed Pages: 2

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 2nd Semester

1048

BIO-TECHNOLOGY

Paper-BIOT-Elect-Sem-II-T Foundation of Biotechnology

Time Allowed : Three Hours]

[Maximum Marks : 67

Note :— Attempt **TWO** questions each from Section A and Section B. Section C is compulsory.

SECTION—A

- I. (a) Write the differences between gram negative and gram positive bacteria. 7
- (b) Explain the characteristics of fungi and viruses. 6
- II. (a) What are primary and secondary metabolites ? Explain their importance. 7
- (b) What are alkalophiles ? Give examples. 6
- III. (a) What is the difference between reducing and non-reducing sugar ? 7
- (b) What are storage polysaccharides ? 6

- IV. (a) What are lipids ? Write their importance. 7
(b) Write the chemical properties of fatty acids. 6

SECTION—B

- V. (a) Describe the application of enzymes in food processing industry. 7
(b) Write the structure of positively charged amino acids. 6
- VI. (a) How is ELISA used as a research tool for enzymes ? 7
(b) Write a note on the storage and contractile proteins. 6
- VII. (a) Write the principle of scintillation counter. 7
(b) Differentiate between SEM and TEM. 6
- VIII. (a) Write three applications of UV/V in spectrometry. 7
(b) Write a short note on X-ray diffraction. 6

SECTION—C

- IX. (a) What is the function of pili ?
(b) What is the function of phosphoglycerides ?
(c) Give two examples of structural polysaccharides.
(d) Name two sulphur containing amino acids.
(e) Name the law that governs diffraction of X-rays.
(f) What is the purpose of Western blotting ? 2.5×6