

B. Tech.

ROLL NO- 2017

2nd Sem.

B.TECH FOOD TECHNOLOGY
II Semester Examination 2017
Course Code- BFTC-206
Course Title - Introductory Biology

TIME: 3 hours

Max. Marks: 70

Note: 1. It is compulsory to answer all the questions of Section-A.
2. Answer any four questions in Section- B.

Section-A (5*6=30)

- (g) What are phospholipids? Explain their function. (2M)
(h) Enlist essential amino acids. (2M)
(i) Classify carbohydrate on the basis of structure? (2M)
- Q2. (a) Define: Pribnow Box, Okazaki fragments, Chargaff's rule (3M)
(b) Define law of independent assortment. (1M)
(c) Explain the formation of pyrimidine dimers. (2M)
- Q3. (a) Illustrate the linear structure of starch molecule. (3M)
(b) What are bacterial endospores? Explain using suitable diagram. (3M)
- Q4. (a) Explain the differences between prokaryotic and eukaryotic translation process (3M)
(b) Describe the structural features and functions of mitochondrion. (3M)
- Q5. (a) What are pentoses? What are the roles of pentoses in DNA and RNA molecules? (3M)
(b) Differentiate between mitosis and meiosis. (3M)

Section- B (4*10=40)

- Q1. What are alleles? Explain recessive, dominant, homozygous and heterozygous alleles. Illustrate multiple alleles with ABO blood group as an example. A woman homozygous for blood type B marries a man who is heterozygous for blood type A. State the possible phenotypic ratio of the offspring. (10M)
- Q2. Describe the primary, secondary, tertiary and quaternary structure of proteins. (10M)
- Q3. Discuss the concepts put forward by Darwin with specific reference to concepts of variation, adaptation, struggle, fitness and natural selection. (10M)
- Q4. Write short notes on the following (any 4): (10M)
(j) Triplet code and its features
(k) Globulins
(l) Hardy Weinberg principle
(m) RNA editing
(n) Euglena
- Q5. What are fatty acids? Classify fatty acids on the basis of presence or absence of double bond? (10M)
- Q6. Explain the structure and multiplication of bacteriophage. (10M)