

December 2023 - Set 2
B.Tech - 3rd Sem
Biology (BSC-01)

Duration: 3 Hours

Max. Marks: 75

Instructions:

- It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.
- Answer any four questions from Part-B in detail.
- Different sub-parts of a question are to be attempted adjacent to each other.

PART A

- Q1**
- | | |
|---|-------|
| (a) Compare eye and camera | (1.5) |
| (b) Explain the reason why should an engineer study biology | (1.5) |
| (c) Explain media and types | (1.5) |
| (d) Explain tertiary structure of protein | (1.5) |
| (e) What are polysaccharides | (1.5) |
| (f) Distinguish between DNA and RNA | (1.5) |
| (g) What is apoenzyme and coenzyme | (1.5) |
| (h) Explain the reaction of enzyme kinetics | (1.5) |
| (i) Why <i>Pisum sativum</i> was selected by Mendel for performing genetic experiment | (1.5) |
| (j) Define immunology and virology | (1.5) |

PART B

- Q2**
- | | |
|--|------|
| (a) What is genetic code? Explain with examples. | (10) |
| (b) Explain model organism with example. | (5) |
- Q3**
- | | |
|--|------|
| (a) Explain carbohydrates with examples. | (5) |
| (b) Explain the theories for mechanism of actions of enzymes | (10) |
- Q4** Explain the technique for pure culture and single culture organism isolation.
(15)

- Q5** (a) Explain Photosynthesis with figure. (5)
(b) Explain technique of sterilization. (10)
- Q6** (a) Explain in detail mendels law (10)
(b) Distinguish between prokaryotes and Eukaryotes (5)
- Q7** Explain TCA and glycolysis (15)



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