

410601/410501

Roll No. _____

Total No. of Pages: 2

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B. Tech. IV - Sem. (Main / Back) Exam., (Academic Session 2021- 2022)

Electrical Engineering

4EE2 - 01/4EX2 - 01 Biology

Common to EE & EEE

Time: 2 Hours

Maximum Marks: 80

Min. Passing Marks:

Instructions to Candidates:

***Part – A: Short answer questions (up to 25 words) 2 × 3 marks = 6 marks.
Candidates have to answer two questions out of five.***

***Part – B: Analytical/Problem solving questions 3 × 15 marks = 45 marks.
Candidates have to answer three questions out of six.***

***Part – C: Descriptive/Analytical/Problem Solving questions 1 × 29 marks = 29 marks.
Candidates have to answer one questions out of three.***

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

***Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)***

1. NIL

2. NIL

PART – A

Q.1 Differentiate between autotrophs and heterotrophs.

Q.2 Explain gene mapping.

Q.3 What are polysaccharides and discuss the various functions of polysaccharides?

Q.4 Differentiate between endergonic and exergonic reactions with suitable example.

Q.5 Give a brief account of nucleosomes.

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PART – B

- Q.1 Explain different types of microbes.
- Q.2 Describe structure of different types of protein with suitable examples.
- Q.3 Give a brief account of principle of staining.
- Q.4 What is excretion? Define and explain ammonotelic, uricotelic and ureotelic terms with suitable examples.
- Q.5 Write a short note on microscopy.
- Q.6 Explain the concept of energy charge.

PART – C

- Q.1 Draw a well labelled diagram of double helix model of DNA. Also explain it in detail.
- Q.2 Give a detailed account of classification of enzymes and mechanism of enzyme action.
- Q.3 What do you understand by the term sterilization? Describe various methods of sterilization.

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