

FACULTY OF ENGINEERING

Code No. 2931/AICTE/M

**B. E. (ECE/M/P/AE/I.T) IV – Semester (AICTE) (Main) Examination,
December 2020**

Subject: Biology for Engineers

Time: 2 hours

Note: (Missing data if, any can be assumed suitable). **Max. Marks: 70**

PART – A

Answer any five questions.

(5 x 2 = 10 Marks)

1. What is Cell Theory?
2. What are the functions of lipids?
3. Explain briefly about plant growth.
4. Describe briefly about respiration.
5. State the significance of meiosis.
6. Give a brief account of Central dogma.
7. Write a short note on AIDS.
8. How can we prevent hypertension?
9. What are recombinant vaccines?
10. Explain about bioremediation.

PART – B

Answer any four questions.

(4 x 15 = 60 Marks)

11. (a) Describe the structure of prokaryotic cell.
(b) Discuss about general characters, classification and functions of carbohydrates.
12. (a) Explain about photosynthesis and its significance in plants.
(b) Describe about the circulatory systems and functions in animals.
13. (a) Describe the Mendel laws of inheritance.
(b) Provide the evidence to prove DNA as genetic material.
14. (a) Discuss the causes, diagnosis and treatment of diabetes.
(b) Give an account on acquired immunity.
15. (a) How are transgenic plants useful in biopharming? Discuss with examples and applications.
(b) Discuss the production of bioenergy.
16. (a) Give an account on general features and types of microbes.
(b) Write a note on economic importance of microorganisms.
17. (a) What are biomaterials? Discuss with examples and applications.
(b) Discuss about biomedical instrumentation and its applications.