**B.TECH.**
**THEORY EXAMINATION (SEM–II) 2016-17**
**INTRODUCTION TO BIOSCIENCE**

*Time : 3 Hours*                                                         *Max. Marks : 100*

*Note :* *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

**SECTION – A**

1.    **Explain the following:**                                         **10 x 2 = 20**
      (a)    _____Coined the term cell in the year _____
      (b)    The structure of plasma membrane can be best explained by _____model.
      (c)    Specify the role of Restriction enzymes.
      (d)    What is Cytochrome?
      (e)    Define the process of Cloning?
      (f)    What is Cell cycle?
      (g)    Write the underlying principle of Electrophoresis.
      (h)    Write in brief about the process of Lactation.
      (i)    What is the function of lysosomes?
      (j)    What is RNA splicing?

**SECTION – B**

2.    **Attempt any five of the following questions:**                   **5 x 10 = 50**
      (a)    What is Kreb's cycle? Describe the steps involved in Kreb's cycle.
      (b)    Enumerate the points of difference between DNA and RNA.
      (c)    What is Cell Cycle? Describe the various stages of cell cycle.
      (d)    Describe the various steps involved in the process of gene cloning
      (e)    What is the role of vacuole & vesicle? Explain structure of plasma membrane.
      (f)    Give the different phases of menstrual cycle and explain the various changes that occur in each phase.
      (g)    What is Genome? Describe the Human Genome Project and write about the salient feature of human genome.
      (h)    What is Oxidative phosphorylation? Differentiate between Chloroplast and mitochondria.

**SECTION – C**

      **Attempt any two of the following questions:**                   **2 x 15 = 30**
1.    Explain with the help of suitable diagrams the process of DNA replication.
2.    What is Contraception? Discuss the different methods of birth control.
3.    What is Transcription? Describe with suitable diagrams the formation of m-RNA from DNA template.