

Printed Pages : 2



BT-102

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 154105**

Roll No.

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**B. Tech.**

(SEM. I) (ODD SEM.) THEORY  
EXAMINATION, 2014-15  
**BIOLOGY - I**

Time : 3 Hours]

[Total Marks : 100

**Note:** Attempt all questions.

1. Attempt any 4 parts of following: **4x5=20**
  - (a) What do you mean by power house of living cell?  
Discuss the structure of cell membrane.
  - (b) What do you mean by viruses? Explain the structure of virus with suitable example.
  - (c) Define botanical garden. How they are different by zoological parks?
  - (d) Name any four common bacterial diseases.
  - (e) What do you understand by nucleoplasm? Discuss the function of nucleus.
  
2. Attempt any 4 parts of following: **4x5=20**
  - (a) Discuss the structure and functions of cell wall with suitable example.
  - (b) Explain the structure and functions of Mitochondria.

- (c) What do you understand by Lichens? Discuss with suitable example.
- (d) Why lysosomes are known as "Suicide bags"?
- (e) Discuss different types of modifications in stem & leaf.
3. Attempt any 2 parts of following: **2x10=20**
- (a) Discuss the morphology & anatomy of dicot seeds.
- (b) Define cell theory. How new species are formed from existing one? Explain.
- (c) Discuss basic constituents of living Cell. Also discuss the role of nuclear membrane in living cell.
- (d) What do you meant by binomial system of nomenclature?
4. Attempt any 2 parts of following: **2x10=20**
- (a) Discuss structural & functional features of prokaryotic & eukaryotic cells. How are these different each other?
- (b) What is a cell cycle? Describe synthetic phase of cell cycle.
- (c) Describe the process of photosynthesis in plants. Explain biochemical reactions during photosynthesis.
5. Attempt any 2 parts of following: **2x10=20**
- (a) What is "guttation"? Explain methods of exchange of gases through plants.
- (b) What is mitosis? Describe briefly the various events that occur during this process of cell division.
- (c) What is meiosis? Describe the various events that occur during the process of meiosis in a cell.
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