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M.Sc.(BT) (2011 & Onwards) (Sem.-1)

Subject Code : MSBT-105

Paper ID : [F0253]

Max. Marks : 60

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students has to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students has to attempt any **TWO** questions.

SECTION-A

1. Answer briefly :

- a. Explain Peptidoglycan cell wall.
- b. Write difference between phase contrast and dark field electron microscope.
- c. What do you mean by cell cycle?
- d. Write functions of Mitochondria.
- e. Define MAPK.
- f. Explain Repression.
- g. Define Gametogenesis.
- h. Define active and passive transport.
- i. What is receptor mediated endocytosis?
- j. Write functions of chloroplast.

SECTION-B

2. Give a brief account on structure of plasma membrane.
3. Write a detailed note on K^+ channel.
4. Discuss in detail applications of electron microscope.
5. Give detailed account on JAK-STAT signalling pathways.
6. Give an elaborative account on somatic mitosis.

SECTION-C

7. Give a detailed account on history and development of cell theory.
8. Describe technique and mechanism of vesicular traffic.
9. Discuss in detail molecular mechanism of transcription.