

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (BT) (2013 to 2017) (Sem.-4)

STEM CELL TECHNOLOGY

Subject Code : BSBT-210

Paper ID : [F0242]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

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 have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

Q.1 Define :

- i) Totipotency.
- ii) Transdifferentiation.
- iii) Autologous Transplant.
- iv) Trophoblast stem cells.
- v) Transit Cells.
- vi) Teratoma.
- vii) Stem cell plasticity.
- viii) Stochastic model.
- ix) Stem cell Microenvironment.
- x) Stem cell niche.

SECTION-B

- Q.2 Write a note on Differentiation and Self Renewal in stem cells.
- Q.3 What is Deterministic model? Explain.
- Q.4 Write a note on Epidermal stem cells.
- Q.5 Discuss the role of microenvironment in Stem cell development and maintenance.
- Q.6 Write a note on Xenograft systems for Stem cell gene therapy.

SECTION-C

- Q.7 Deliberate on the source, properties and therapeutic applications of embryonic stem cells.
- Q.8 What are different hematopoietic stem cell assays? Discuss their principles and concepts.
- Q.9 Elaborate on application of Stem cells in Gene therapy.