S.No. 166 **12PBT07**

(For the candidates admitted from 2012-2013 onwards)

M.Sc. DEGREE EXAMINATION, APRIL/MAY 2018.

Third Semester

Biotechnology

ANIMAL CELL SCIENCE AND TECHNOLOGY

Time : Three hours Maximum : 75 marks

SECTION A — ($5 \times 5 = 25$ marks)

Answer ALL questions.

1. (a) Explain the characteristics of prokaryotic and Eukaryotic cell.

Or

(b) Write short notes on Inverted Microscope.

2. (a) Explain the basic principles of Autoclave.

Or

(b) Give a detailed on physiochemical properties of culture media.

3. (a) Explain the advantages of serum in culture media.

Or

(b) Explain the functions of serum in the Culture Medium.

4. (a) Explain the application of primary cell culture.

Or

(b) Write short notes on cell cloning.

5. (a) Explain stem cell culture.

Or

(b) Discuss Somatic cell genetics.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Explain the structure and function of mitochondria.

Or

(b) Give an account on Cryopreservation.

7. (a) Discuss the various physical constituent of culture media.

Or

(b) Explain the role of carbondioxide in animal cell culture.



8. (a) Explain the need of serum-free media in animal cell culture.

Or

(b) Explain the methods for assessing cell viability and cytotoxicity.

9. (a) Explain cell synchronization.

Or

(b) Outline the applications of animal cell culture system.

10. (a) Explain embryonic stem cell and their application.

Or

(b) Give a detailed note on tissue engineering.

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