

2015

M.Sc.

3rd Semester Examination

BIO TECHNOLOGY

PAPER—BIT-302

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full

*Candidates are required to give their answers in
own words as far as practicable.*

Illustrate the answers wherever necessary.

Answer all questions.

Group—A

1. Answer any *five* questions from the following
 - (a) What is artificial skin ?
 - (b) What is aerosome ? What is its function ?
 - (c) Define cell line and cell strain.

- (d) What is chromosome painting?
- (e) State the roles of clulating agents in tissue disaggregation.
- (f) What is 'Wharton's Jelly'?
- (g) Write the name of four slectable markers used during gene transfer in animal cell.
- (h) Write the application of embryo sexing.

Group—B

Answer any *two* questions : 2×5

- 2. Briefly describe how animal cell can be used to produce medically important substances. 5
- 3. Describe the roles of the major factors present in serum which promotes growth and proliferation of cell in culture. 5
- 4. What is the importance of cell synchronisation? Describe different methods of cell synchronisation. 2+3
- 5. What is immortal cell line? How immortalisation can be achieved in cell culture. 1+4

Group—C

Answer any *two* questions :

6. What is MCTS ? How can it be produced ? What are the applications of MCTS ? 2
 7. What are knock out mice ? How does negative-positive selection work in gene targeting with ES cells ?
 8. Draw and label a spermatozoan with finer details. Describe different types of infertilities in human males and females.
 9. What is nuclear cloning ? Discuss how transgenics might improve fish aquaculture.
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