

Code :R7422301

1

IV B.Tech II Semester(R07) Regular Examinations, April 2011
ANIMAL CELL SCIENCE & TECHNOLOGY
(Biotechnology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
Draw neat and labelled diagrams wherever necessary

1. Describe in detail the ultra structure of animal cell.
2. (a) Explain the role of CO₂ in culture medium preparation.
(b) Write briefly about cell transformation.
(c) Write about patterns of growth measurements.
3. (a) Describe simple growth medium.
(b) Write briefly about cell separation.
(c) What are the characters of cultured cells?
4. Explain various techniques involved in invitro mammalian cell culture.
5. (a) Write briefly about measurement of cell death.
(b) Explain cell cultured based vaccines.
6. (a) Describe briefly Somatic cell genetics.
(b) Explain briefly on organ culture.
(c) Write about primary cell line culture.
7. Describe in detail the three dimensional culture.
Add a note on tissue engineering.
8. (a) Explain the role of serum in culture medium preparation.
(b) Write about measurement of viability.
(c) Write briefly about sealing-up of animal cell culture.

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1. What are different steps involved in cell cloning? Add a note on micromanipulation.
2. (a) Describe simple growth medium.
(b) Explain role of CO₂ in culture medium preparation.
(c) Write briefly on histolytic culture.
3. (a) Explain briefly the applications of embryonic stemcells.
(b) Describe disaggregation of tissue and primary culture.
(c) Write briefly about cell transformation.
4. Describe the detail of three dimensional culture. Add a note on tissue engineering.
5. (a) What are different types of equipments & materials used in animal cell culture techniques?
(b) Explain role of supplements in culture medium preparation.
6. (a) Describe briefly stem cell culture.
(b) Write about patterns of growth measurements.
(c) Explain cell-cultured based vaccines.
7. Write an essay on Apoptosis.
8. (a) Describe cell synchronization.
(b) Describe the Biology of cultured cells.
(c) Explain briefly the metabolic functions of different constituents of culture medium.

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1. Write an essay on chemical and physical functions of different constituents of culture medium.
2. (a) Explain primary cell line culture.
(b) Describe cell cultured based vaccines.
(c) Describe the application of serum and protein free defined media in culture medium preparation.
3. (a) Explain briefly Apoptosis.
(b) Write about scaling-up of animal cell culture.
(c) Write briefly about measurement of cell death.
4. What are different steps involved in cell cloning? Add a note on micromanipulation.
5. (a) Write briefly on measurement of viability.
(b) Explain cell separation.
(c) Give an account of the applications of embryonic stem cells.
6. (a) Describe the patterns of growth measurement.
(b) Explain briefly somatic cell genetics.
(c) Describe organ culture.
7. Describe in detail the three dimensional culture. Add a note on tissue engineering.
8. (a) Explain role of supplements in culture medium preparation.
(b) Write about cell transformation.
(c) Describe briefly the structural organization of animal cell.

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Answer any FIVE questions
All questions carry equal marks
Draw neat and labelled diagrams wherever necessary

1. Explain in detail the three dimensional culture. Add a note on tissue engineering.
2. (a) What are different equipments used for animal cell culture?
(b) Explain cell cultured based vaccines.
(c) Write characters of cultured cells.
3. (a) Describe the role of CO₂ in culture medium preparation.
(b) Write briefly the measurement of cell death.
(c) Describe disaggregation of tissue and primary culture.
4. Explain the biology and characterization of culture cells. Add a note on their applications.
5. (a) Write briefly on patterns of growth measurement.
(b) Describe the embryonic stem cells.
(c) Write briefly on somatic cell genetics.
6. (a) Write about maintenance of cell culture.
(b) Describe briefly the structure of animal cell.
(c) Explain cell synchronization.
7. Describe various techniques involved in invitro mammalian cell culture.
8. (a) Explain the chemical functions of constituents of culture medium.
(b) Describe simple growth medium.
(c) Describe briefly the steps involved in cell cloning.
