Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore – 641 043

Continuous Internal Assessment II – April 2025

II Semester

Class : I PG **Max. Marks: 60**

Major : Biotechnology **Time: 2 Hours**

23MBTC08 Animal Biotechnology

CO1 : Apply the knowledge of cell culture techniques in the production of biologicals

CO2: Examine the benefits of animal transgenesis

CO3: Appreciate the benefits of therapeutic cloning to treat human diseases

CO4: Review the benefits and challenges of animal cloning

CO5: Explore the benefits of stem cell therapy in health and medical fields

CO6: Adopt suitable integrated pest management strategies to significantly reduce the use of pesticides

Part – A **(6 x 1 = 6)**
Choose the correct answer

1. What does differentiation of stem cell specify? CO:5 K-2
   a. self -renewal b. asymmetric replication
   c. stochastic differentiation d. potency
2. Reprograming somatic cells into pluoripotent embryonic stem cells can be achieved by CO:4 K-2
   a. SCNT b. cell fusion c. xenotransplantation d. roslin technique

3. Which juvenile hormone analog is used as a neutraceutical? CO:3 K-1
   a.Ecdysoids b. mevalonate
   c. acetate d. ectoside
4. Individual groups used in fabrication of scaffolds for tissue engineering include all EXCEPT CO:3 K-1
   a. ceramics b. synthetic polymers
   c. natural polymers d. cellulose
5. The protein produced using silkworm larvae is CO:4 K-2
   a. MAB b. Human alpha interferon c.insulin d.factor VIII

6.Which among these is a insect moulting hormone? CO:5 K-1
   a. ectosterols b. thromboxane c. corpus allata d. ecdysone

Part – B **3X6 =18**
Answer ALL questions
Answers should not exceed 400 words or two pages

7. (a) Mention the different materials for tissue engineering CO:5 K-2

(Or)

7.(b)How are growing cells using three dimensional cultures advantageous. CO:4 K-2

8. (a) How is therapeutic cloning employed to address the issues affecting humans? CO:6 K-2

(Or)

8. (b) What is the characteristics of good model organism? CO:4 K-2

9.(a) Discuss the different types of cell fusion techniques. CO:3K-3

or

9.(b) Explain the advantages of three-dimensional culture CO:3K-3

Part – C **3x12 = 36**

Answer ALL questions

Answers should not exceed 800 words or four pages

10. (a) How is transgenic gene technology helpful to improve the yield of biological ? CO:5 K-2

(Or)

10.(b) Explain the applications of tissue engineering CO :4 K-2

11. (a) Discuss the need for IVF and explain the steps involved in the procedure. CO5K2

or

11.(b) How does Juvenile hormone analogues work in control and management of pests? CO:4 K-2

12.(a)Explain how insects can be employed for the production of biologicals CO:3 K-2

or

12.(b) Explain the production of any two biologicals using cell culture system. CO: 4K-2

Staff-in-charge: Dr.S.Sumathi **10 copies**