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Roll No. 169353211

M.Sc. (Bio-Tech.)-III Sem.

NP-3340

M. Sc. (Bio-Tech.) Examination, Dec. 2017

Animal Biotechnology and Immunology

[H-303 (M.Sc.Bio-Tech.)]

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the *five* questions. Each question carries 2 marks. Very short answer is required not exceeding 75 words. $2 \times 5 = 10$

1. What are effector cells?
2. Define self-MHC restriction.
3. What is Antigen processing?

(2)

4. Explain Enzymatic Disaggregation with suitable examples.
5. Describe the applications of Artificial skin.

Section-B

(Short Answer Questions)

Attempt any *two* questions out of the following three questions. Each question carries 5 marks. Short answer is required not exceeding 200 words. $5 \times 2 = 10$

6. Compare the following :
 - (a) Monoclonal and hybrid antibodies
 - (b) Antibodies and interferons.
7. What are the useful properties of hybridomas ? How are they developed ?
8. Comments upon the following :
 - (a) Gas phase for cell cultures
 - (b) Continuous cell lines.

Section-C

(Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 10 marks. Answer is required in detail. $10 \times 3 = 30$

(3)

9. What is immunogenicity ? Explain four properties of immunogens those determine the immunogenicity.
10. Describe the embryonic stem cell transfer technology for the production of transgenic mice and discuss its various applications and limitations.
11. Define Vaccine. Describe various modern methods of vaccine development with suitable examples.
12. Briefly describe the various types of culture media used for cell cultures. Explain the role of serum in culture medium and discuss its advantages.
13. Explain the process of purification and characterization on monoclonal antibodies with their advantages.

11. What is cell mediated immunity? Give the detail of B and T lymphocytes. 2+8

12. Draw the diagram illustrating the general structure, including the domain of class I MHC molecule, class II MHC molecule and membrane bound antibody on B cells. Describe the regulation of MHC expression. 7+3

13. Write short note on any **two** of the following: 5+5

(i) In-vitro fertilization

(ii) Transgenic Animal

(iii) ELISA

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(21218)

Roll No. 1709356452

M.Sc. (Biotech.) - III Sem.

NP-3340

M.Sc. (Biotechnology) Examination,

Dec.- 2018

Animal Biotechnology and Immunology

(M.Sc. Biotech.)

(H-303)

Time : Three Hours]

[Maximum Marks :50

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note: Attempt all the **five** questions. Each question carries **2** marks. Very short answer is required.

2×5=10

1. What is the Interferon?

2

P.T.O.

2. What is Cytokines? Give a suitable example.

2

3. What is Epitopes?

2

4. What is antigenecity? Describe the type of Hapten.

2

5. What is Lymph Nodes?

2

Section-B

(Short Answer Questions)

Note: Attempt any **two** questions out of the following three questions. Each question carries **5** marks. Short answer is required.

5×2=10

6. What is the tissue and organ culture? Summarized its methods.

5

7. What is Innate immunity? Describe the struc-

ture and function of cell types of Innate immunity.

5

8. What is auto-immunity? Describe various auto-immunity diseases.

5

Section-C

(Detailed Answer Questions)

Note: Attempt any **three** questions out of the following five questions. Each question carries 10 marks. Answer is required in detail.

10×3=30

9. Describe the mechanism of Immobilized and somatic cell fusion with its application.

10

10. What is Animal cloning? Describe the ethical and social issues regarding with human cloning.

2+8

A
(21119)

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Roll No.

M.Sc. (Biotech.) III Sem.

NP-3340

M.Sc. (Biotechnology) Examination,
November-2019

**ANIMAL BIOTECHNOLOGY AND
IMMUNOLOGY**

M.Sc. (Biotech.)

(H-303)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt questions from all sections as per instructions.

Section--A

Very Short Answer Questions

Note : Attempt all the five questions. Each question carries 2 marks. Very short answer is required not exceeding 75 words.

5×2=10

1. Cytokines
2. Immunity
3. Hapten

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[P.T.O.]

(2)

4. Lymph nodes
5. Artificial Skin

Section-B

Short Answer Questions

Note : Attempt any *two* questions out of the following three questions. Each question carries 5 marks. Short answers required not exceeding 200 words.

$2 \times 5 = 10$

6. Define autoimmunity and describe two autoimmunity diseases.
7. Describe five structure of IGg and its diversity.
8. Write strategies for the development of vaccines.

Section-C

Detailed Answer Questions

Note : Attempt any *three* questions out of the following five questions. Each question carries 10 marks. Answer is required in detail.

$10 \times 3 = 30$

9. Write an essay on antigen and antibody reactions.

(3)

10. What do you mean by tissue and organ culture summerise is methods in detail.

11. Write notes on :

- (a) ELISA
- (b) MHC

12. What is animal cloning ? Describe in detail the ethical and social issues regarding with human cloning.

13. Write notes on :

- (a) Transgenic animal
- (b) *in vitro* fertilization

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(20221)

Roll No. 190935227065

M.Sc.(Biotech.)-III Sem.

NP-3340

M.Sc. (Biotechnology)

Examination, Dec. - 2020

Animal Biotechnology and Immunology

(H-303)

M.Sc. (Bio-Tech.)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt questions from all Sections
as per instructions.

Section - A

(Very Short Answer Questions)

Note : Attempt all questions. Each question
carries 2 marks. Very short answer is
required.

2×5=10

✓ 1. Organ culture

✓ 2. ELISA

P.T.O.

- ✓ 3. Passive immunity
- ✓ 4. Vaccines
- ✓ 5. Types of Antibodies.

Section - B

(Short Answer Questions)

Note : Attempt any **two** questions. Each carries 5 marks. Short answers are required. $5 \times 2 = 10$

- ✓ 6. Describe major historic developments leading to concept of animal tissue culture and establishment of Animal Biotechnology.
- 7. Give an account of MHC.
- ✓ 8. Write notes on-
 - (a) RIA
 - (b) T cell cloning

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Section - C

(Detailed Answer Questions)

Note : Attempt **three** questions. Each carries 10 marks. Long answers are required. $10 \times 3 = 30$

- ✓ 9. Write an essay on antigen-antibody reaction.
- 10. Describe **in vitro** fertilization in detail and give its applications.
- ✓ 11. Write notes on
 - (a) AIDS
 - (b) Interferons
- 12. Write notes on:
 - (a) Genetic control of immune response.
 - (b) Genetic manipulation of Immunoglobins
- ✓ 13. Write notes on
 - (a) Secondary Lymphoid Organs
 - (b) Auto immune diseases.

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2. Difference between Humoral and cell mediated immunity
3. RIA
4. Structure of IgG
5. Interferon

Section-B

(Short Answer Questions)

Note : Attempt any **one** question. Each question carries 10 marks. Short answers are required. $1 \times 10 = 10$

6. Write a note on Antigen-Antibody interaction.
7. What is cell culture? How the cells are maintained in culture and what are the different kinds of cell culture media?

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8. Write short notes on-
 - (a) Ethical and social issues related to human cloning.
 - (b) B lymphocytes

Section-C

(Detailed Answer Questions)

Note : Attempt any **two** questions. Each question carries 15 marks. Long answers are required. $2 \times 15 = 30$

9. Write in detail on major Histocompatibility Complex (MHC) and complements.
10. Write notes on:-
 - (a) Somatic cell fusion
 - (b) Auto immune diseases
11. What is Embryo transfer technology? What are the application of Embryo transfer technology?
12. Write an essay on Antigen-Antibody Interactions?

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P.T.O.