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12/02/20



THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES
ACADEMIC YEAR 2019/2020- SEMESTER I

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU5303 – IMMUNOLOGY & SEROLOGY
NO BOOK TEST

DURATION: 1 ½ HOURS

DATE: 20th FEBRUARY 2020

TIME: 2.00 PM -- 3.30 PM

REGISTRATION NO:

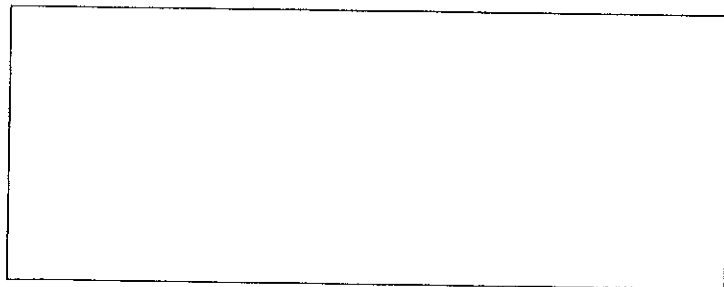
IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES

- This question paper consists of 9 pages with 10 Multiple Choice Questions (Part A), 04 Structured Essay Questions (Part B) and 01 Essay Question (Part C).
- Write your Registration Number in the space provided.
- Answer ALL questions.
- **Multiple Choice Questions (Part A):** Mark the best answer for each question in the answer sheet provided by placing a cross (X) in **INK** in the relevant cage. (Answers in pencil will **NOT** be marked)
- **Structured Essay Questions (Part B):** Write answers within the space provided.
- **Essay Question (Part C):** Answer the question on the provided papers.
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are **NOT** allowed. Leave them outside.

Good Luck!

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To:



Part A: Multiple Choice Questions (10 Marks)

1. Which one of the following is an antigen presenting cell?
 - a. Macrophage
 - b. Natural killer cell
 - c. T cell
 - d. Neutrophil

2. Innate immunity is,
 - a. exerted by B lymphocytes
 - b. capable of differentiating closely related pathogens
 - c. mutually inclusive with adaptive immunity
 - d. exerted after adaptive immunity

3. Helper T cells,
 - a. directly kill infected cells.
 - b. phagocytose pathogens
 - c. initiate the complement system
 - d. activate B cells

4. Which one of the following is most correct regarding the thymus?
 - a. Immune responses against foreign antigens occur in the thymus
 - b. Antigens enter to the thymus via blood
 - c. T cell maturation occurs in the thymus
 - d. Afferent lymphatics are present in the thymus

5. C4b2a is,
 - a. C3 convertase in the classical pathway
 - b. C5 convertase in the alternative pathway
 - c. an opsonin
 - d. an anaphylatoxin

6. Which one of the following is a function of an antibody?
 - a. Mediates opsonization
 - b. Mediates inflammation
 - c. Mediates chemotaxis
 - d. Activates lectin pathway

7. Which one of the following is most correct regarding MHC class I molecules?
 - a. Present antigens to CD4⁺ T cells
 - b. Expressed only on antigen presenting cells
 - c. Composed of alpha and beta chains
 - d. Present endogenous antigens

8. Complement activation is exerted by,
 - a. IgD
 - b. IgA
 - c. IgE
 - d. IgG

9. Which one of the following antibodies could sensitize mast cells?
 - a. IgE
 - b. IgG
 - c. IgA
 - d. IgM

10. Which one of the following is most correct regarding primary immune responses?
 - a. Mainly produce IgG antibodies
 - b. Consist of a longer latent phase
 - c. Exerts a long-lasting immune response
 - d. Recognize the antigen quickly

Part B: Structured Essay Questions (80 marks)

Q1.

1.1 Name three (03) phases of adaptive immune responses. (3 Marks)

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1.2 Describe antibody dependent cell mediated cytotoxicity (ADCC) of natural killer cells. (05 Marks)

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1.3 List four (04) main functions of IgG antibodies. (12 Marks)

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Total- 20 Marks

Q2.

2.1 Give three (03) pathological conditions that could occur due to complement deficiencies.

(03 Marks)

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2.2 Write a brief description on the activation of classical pathway up to C3 convertase formation.

(05 Marks)

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2.3 List six (06) functions of the complement system.

(12 Marks)

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Total- 20 Marks

Q3

3.1 Give one (01) cell which expresses each of the following MHC molecules.

(04 Marks)

MHC class I.....
MHC class II.....

3.2 List three (03) pathogenic conditions associated with MHC molecules.

(06 Marks)

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3.3 Write a brief note on antigen presentation by MHC molecules.

(10 Marks)

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Total- 20 Marks

Q4

4.1 List three (03) factors affecting immunogenicity of an antigen (06 Marks)

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4.2 Give three (03) examples for mechanical barriers. (06 Marks)

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4.3 Give two (02) examples for each of the following lymphoid organs (08 Marks)

Primary lymphoid organs:

i.....

ii.....

Secondary lymphoid organs

i.....

ii.....

Total- 20 Marks

Part C Essay Question (10 Marks)

1. Write an essay on phagocytosis including the main stages of phagocytosis

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REGISTRATION NO:

ANSWER SHEET FOR PART A

1.

a	b	c	d
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2.

a	b	c	d
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3.

a	b	c	d
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4.

a	b	c	d
---	---	---	---

5.

a	b	c	d
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6.

a	b	c	d
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7.

a	b	c	d
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8.

a	b	c	d
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9.

a	b	c	d
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10.

a	b	c	d
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