

SECOND PROFESSIONAL M.B.B.S. DEGREE EXAMINATION, JULY 2009**MICROBIOLOGY—Paper I**

Time : Two Hours

Maximum : 40 Marks

*Answer Sections A and B in separate answer books.**Draw diagrams wherever necessary.**MCQs should be answered first in the response sheet provided.***Section A**

- I. Multiple choice questions, single response type-8 (separate sheet attached). $(8 \times \frac{1}{2} = 4 \text{ marks})$
- II. Match the following, single response type - 8 (separate sheet attached). $(8 \times \frac{1}{2} = 4 \text{ marks})$
- III. Draw and label :
- (a) Structure of Immunoglobulin.
 - (b) Pneumococci-Negative staining.

 $(2 \times 1 = 2 \text{ marks})$

IV. Short answer questions :

- 1 Name four organisms causing UTI.
- 2 What is opsonisation ?
- 3 What is Quellung reaction ?
- 4 What is Human leukocyte antigen ?

 $(4 \times 1 = 4 \text{ marks})$

V. Write short notes on :

- 1 Primary atypical pneumonia.
- 2 Halophilic vibrios.
- 3 Malignant pustule.

 $(3 \times 2 = 6 \text{ marks})$ **Section B**

- VI. A 2 year old child was brought to the hospital with high grade fever and vomiting. She was stuporous and had petechial rash. On examination neck rigidity present, kernigs sign positive.

- 1 What is the clinical diagnosis ?
- 2 Briefly mention the pathogenicity.
- 3 Write in detail about the laboratory diagnosis of the disease.

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- 4 What are the complications ?
- 5 What is the treatment ? Add a note on its prophylaxis.

(1 + 2 + 3 + 3 + 1 = 10 marks)

VII. Short answer questions :

- 1 What is transduction ?
- 2 Non-suppurative complications of streptococcus pyogenes infection.
- 3 What is toxic shock syndrome ?
- 4 What is the principle of ELISA test ?

(4 × 1 = 4 marks)

VIII. Write short notes on :

- 1 Delayed hypersensitivity.
- 2 Immunofluorescence test.
- 3 Q fever.

**MICROBIOLOGY—Paper I****I. MULTIPLE CHOICE QUESTIONS**

Note.—(1) *Do not write anything on the question paper.*

(2) *Write your register number on the answer-sheet provided.*

(3) *Select one most appropriate response and encircle the corresponding alphabet against each question in the answer-sheet provided.*

1. Radial immuno diffusion is used for :

- (A) Histocompactability.
- (B) Detection of reaginic antibodies in serum.
- (C) Shick test.
- (D) Estimation of immunoglobulin classes in serum.

2. Which of the following bacteria has a polysaccharide capsule ?

- (A) Pneumococci.
- (B) Enterococci.
- (C) Haemophilus.
- (D) Listeria monocytogenes.

3. Hide porter's disease is caused by :

- (A) Haemophilus ducreyi.
- (B) Yersinia enterocolitica.
- (C) Bacillus anthracis.
- (D) Brucella melitensis.

4. Pathogenicity of shigella dysenteriae type I is due to :

- (A) Cytotoxin.
- (B) Enterotoxin.
- (C) Invasiveness.
- (D) Colonising factor.

5. The equipment for sterilizing glassware is :

- (A) Sterilizer.
- (B) Incinerator.
- (C) Hot air oven.
- (D) Inspissator.

6. Interleukin-2 (IL-2) is produced by :

- (A) B cells.
- (B) Th2 cells.
- (C) Th1 cells.
- (D) Neutrophils.

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7. Wiskott-Aldrich syndrome occurs due to :

- (A) T cell defects.
- (B) B cell defects.
- (C) Defects in phagocytosis.
- (D) Both T and B cell defects.

8. Congenitally transmitted bacterial infection is :

- (A) Cholera.
- (B) Syphilis.
- (C) Salmonellosis.
- (D) Plague.

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MICROBIOLOGY—Paper I

II. Match the following :—

- | | |
|---------------------------|-----------------------------|
| A 1 Widal test. | (a) Thermoprecipitation. |
| 2 Schick test. | (b) Flocculation. |
| 3 VDRL test. | (c) Agglutination. |
| 4 Ascoli's test. | (d) Neutralisation. |
| | (e) Immunofluorescence. |
| B 1 Wool sorters disease. | (a) Streptococcus pyogenes. |
| 2 Lymes disease. | (b) Bacillus anthracis. |
| 3 Necrotising fascitis. | (c) Yersinia pestis. |
| 4 Bacillary angiomatosis. | (d) Borrelia burgdorferi. |
| | (e) Bartonella henselae. |