

AS-1441

**B.Sc. (Part—II) Semester—IV Examination**

**MICROBIOLOGY**

**(Medical Microbiology)**

Time : Three Hours]

[Maximum Marks : 80

- Note :—** (1) All questions are compulsory.  
(2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :— 2
- (i) Haemolysin causes lysis of \_\_\_\_\_ .
  - (ii) Incomplete antigen is called as \_\_\_\_\_ .
  - (iii) The long form of ELISA is \_\_\_\_\_ .
  - (iv) \_\_\_\_\_ is caused by *Treponema pallidum*.
- (B) Choose the correct alternative : 2
- (i) Amoebiasis is caused by \_\_\_\_\_ .
    - (a) *E. coli* (b) *C. albicans*
    - (c) *E. histolytica* (d) *Pl. malariae*
  - (ii) Study of antigen antibody reaction in vitro is known as \_\_\_\_\_ .
    - (a) Phycology (b) Mycology
    - (c) Zoology (d) Serology
  - (iii) Cholera is \_\_\_\_\_ borne disease.
    - (a) Air (b) Water
    - (c) Soil (d) Vector
  - (iv) \_\_\_\_\_ is a person who harbours the pathogenic microorganisms without suffering from any symptoms.
    - (a) Patient (b) Case
    - (c) Carrier (d) None of these

- (C) Answer in **ONE** sentence : 4
- (i) Define fomite.
  - (ii) Define chemotherapy.
  - (iii) What is attenuation ?
  - (iv) Name the antibody that can cross placenta.
2. (a) Discuss the significance of normal flora of human body. 4
- (b) Differentiate between Exotoxins and Endotoxins. 4
- (c) Describe control of water borne diseases. 4
- OR**
- (d) Explain :—
- (i) Pandemic disease
  - (ii) Cross infection. 4
- (e) Differentiate between pathogenicity and virulence. 4
- (f) Explain vector transmission in brief. 4
3. (a) Explain phagocytosis in brief. 4
- (b) Differentiate between active and passive immunity. 4
- (c) Explain Type-I hypersensitivity with suitable example. 4
- OR**
- (d) Explain role of  $\beta$ -cell in immunity in brief. 4
- (e) Explain Natural Immunity in brief. 4
- (f) Describe Serum sickness in brief. 4
4. (a) Define :
- (i) Antigen            (ii) Antibody. 4
- (b) Discuss the structure of IgG. 4
- (c) Explain applications of precipitation reactions in brief. 4

**OR**

- (d) Enlist classes of Immunoglobulins. Describe IgA in brief. 4
- (e) Explain ELISA test in brief. 4
- (f) Explain :
- (i) Slide agglutination test.
- (ii) Slide flocculation test. 4
5. Describe morphology, pathogenicity, lab diagnosis and prophylaxis of *M. tuberculosis* in detail. 12

**OR**

- Describe morphology, pathogenicity, lab diagnosis and prophylaxis of Cl-tetani. 12
6. What is hydrophobia ? Describe in detail pathogenicity, lab diagnosis and prophylaxis of its causative agent. 12

**OR**

- Describe in detail morphology, pathogenicity, lab diagnosis and preventive measures of HIV. 12
7. (a) Give characteristics of ideal chemotherapeutic agent. 4
- (b) Define :
- (i) Antibiotics
- (ii) MIC. 4
- (c) Explain disc diffusion method of antimicrobial susceptibility testing. 4

**OR**

- (d) Explain mechanism of action of Azidothymidine with its clinical uses. 4
- (e) Discuss agar dilution method of antimicrobial susceptibility testing. 4
- (f) Explain :—
- (i) Chemotherapy
- (ii) Broad spectrum antibiotics. 4

