



Seat No. _____

HB-003-2016013

B. Sc. (Sem. VI) Examination

April – 2023

Microbiology

Faculty Code : 003

Subject Code : 2016013

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

- 1 (a) Objective type questions : 4
- (1) Who discovered Rh system of blood grouping ?
 - (2) Hematopoetic stem cells can differentiate into which other types of cells ?
 - (3) What is FFP ?
 - (4) What is Hemostasis ?
- (b) Answer in brief : (any one out of two) 2
- (1) Enlist four types of human blood group system.
 - (2) Enlist the functions of Blood bank.
- (c) Answer in detail : (any one out of two) 3
- (1) Enlist various components of blood and state their functions.
 - (2) Discuss Hematopoiesis in brief.
- (d) Write a note on : (any one out of two) 5
- (1) Enlist conditions at which blood transfusion is needed. Discuss cross matching in brief.
 - (2) Describe the process of blood coagulation in detail.

- 2 (a) Objective type questions : 4
- (1) What is Heterophile antibody ?
 - (2) Enlist difference between Agglutination and Precipitation.
 - (3) Define : Serology.
 - (4) What is intracutaneous diagnostic test ?
- (b) Answer in brief : (any one out of two) 2
- (1) Discuss precipitation test in brief.
 - (2) Enlist two applications of fluorescent antibody test.
- (c) Answer in detail : (any one out of two) 3
- (1) Explain Neufeld Quelling reaction.
 - (2) State the applications of immune diffusion.
- (d) Write a note on : (any one out of two) 5
- (1) Explain in brief Haemagglutination and Bacterial agglutination.
 - (2) Discuss CFT in detail.
- 3 (a) Objective Type Questions : 4
- (1) Which isotope is used in RIA ?
 - (2) Enlist name of two latest method used for identification of clinical specimen.
 - (3) State the name of enzyme used in ELISA.
 - (4) What is the role of Mg^{+2} in thermal-cycler ?
- (b) Answer in brief : (any one out of two) 2
- (1) State the significance of immunotherapy.
 - (2) Enlist two applications of immohistochemistry.

- (c) Answer in detail : (any one out of two) **3**
- (1) Write a note of Immunofluorescence in detail.
 - (2) Write a detail note on ELISA.
- (d) Write a note on : (any one out of two) **5**
- (1) Discuss RIA in terms of its procedure, types and clinical applications.
 - (2) Discuss Western blotting in terms of its procedure, advantages, disadvantages and applications.
- 4** (a) Objective Type Questions : **4**
- (1) State the name of causative agent of Meningitis.
 - (2) Enlist two names of opportunistic fungi.
 - (3) State the name of causative agent of syphilis.
 - (4) Define : Epidemiology.
- (b) Answer in brief : (any one out of two) **2**
- (1) Discuss Shigellosis in terms of its causative agent and remedies.
 - (2) State the name and principle of test used for detection of typhoid fever.
- (c) Answer in detail : (any one out of two) **3**
- (1) Discuss any one diseases caused by Clostridium in terms of its symptoms and remedies.
 - (2) Discuss Cutaneous mycoses in terms of its causative agent, symptoms and remedies.
- (d) Write a note on : (any one out of two) **5**
- (1) Discuss Mycobacterium in terms of its distinct cellular composition and pathogenesis.
 - (2) Write a detail note on Epidemiological markers.

- 5** (a) Objective Type Questions : **4**
- (1) What is immunization ?
 - (2) What is HSV ?
 - (3) State two names of water born diseases.
 - (4) What is zoonosis ?
- (b) Answer in brief : (any one out of two) **2**
- (1) Define : Vaccine and enlist the types of vaccines.
 - (2) State the symptoms of swine flu.
- (c) Answer in detail : (any one out of two) **3**
- (1) Write a note on Amoebiasis in terms of its causative agent, diagnosis and remedies.
 - (2) Discuss AIDS in terms of its causative agent, symptoms and remedies.
- (d) Write a note on : (any one out of two) **5**
- (1) Write a detail note on Influenza.
 - (2) Enlist the modern approaches adopted to develop newer vaccines. Discuss any one approach in detail.
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