



**DR-003-2016013**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) (CBCS) (W.E.F. 2019) Examination**

**April - 2022**

**Microbiology : Paper - MB-603**

***(Clinical & Diagnostic Microbiology)***

***(New Course)***

**Faculty Code : 003**

**Subject Code : 2016013**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- 1 (a) Answer specifically : 4
- (1) What is Rh factor ?
  - (2) Enlist various types of Blood group antigens in ABO blood grouping.
  - (3) Define: Hemostasis.
  - (4) What is the function of Platelets ?
- (b) Answer in brief : (any **one**) 2
- (1) Briefly explain ABO blood group system.
  - (2) Enlist various types of blood group systems found in humans.
- (c) Answer in detail : (any **one**) 3
- (1) Discuss various components of blood with its function.
  - (2) Discuss Haematopoiesis in brief.
- (d) Write a note on : (any **one**) 5
- (1) Principles and significance of blood transfusion.
  - (2) Blood banking.

- 2** (a) Answer specifically : **4**
- (1) Define: Precipitation Reaction.
  - (2) What is Nuefeld Quellung reaction ?
  - (3) Define : Heterophile antigen.
  - (4) What is the difference between the reactants in precipitation and agglutination reactions ?
- (b) Answer in brief : (any **one**) **2**
- (1) What is Antifibrinolysin ? What is its importance ?
  - (2) What is Fluorescent antibody technique ?
- (c) Answer in detail : (any **one**) **3**
- (1) Enlist various agglutination reactions and discuss any one in detail.
  - (2) Enlist various precipitation reactions and discuss any one in detail.
- (d) Write a note on : (any **one**) **5**
- (1) Intracutaneous diagnostic tests.
  - (2) Special Serological tests.
- 3** (a) Answer specifically : **4**
- (1) Define: Radioimmunoassay.
  - (2) What is Immunohistochemistry ?
  - (3) Define : PCR.
  - (4) What is meant by Immunotherapy ?
- (b) Answer in brief : (any **one**) **2**
- (1) Define Immunoflourescence and write its application in diagnosis of disease.
  - (2) What is ELISA ? Enlist its various types, giving application of each in brief.
- (c) Answer in detail : (any **one**) **3**
- (1) Discuss Western Blot.
  - (2) Discuss Immunoelectrophoresis.
- (d) Write a note on : (any **one**) **5**
- (1) Methods of specimen collection.
  - (2) Identification of microbes from specimen.

- 4 (a) Answer specifically : 4
- (1) Define : Epidemiology.
  - (2) Enlist various types of epidemiological tools.
  - (3) Define Mycosis.
  - (4) Name one disease caused by *Treponema*.
- (b) Answer in brief : (any **one**) 2
- (1) Briefly discuss infection of *Candida albicans*.
  - (2) Enlist various pathogenic species of *Salmonella* and the disease they cause.
- (c) Answer in detail : (any **one**) 3
- (1) Discuss epidemiological markers.
  - (2) Discuss infection caused by *Malassezia furfur*.
- (d) Write a note on : (any **one**) 5
- (1) Pathogenicity, diagnosis, treatment and prevention of Mycobacterial infection.
  - (2) Pathogenicity, diagnosis, treatment and prevention of *Cryptococcus neoformans* infection.
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- 5 (a) Answer specifically : 4
- (1) Name one disease caused by *Plasmodium* species.
  - (2) Enlist two diseases of water borne transmission.
  - (3) Enlist two diseases of air borne transmission.
  - (4) What is Zoonosis ?
- (b) Answer in brief : (any **one**) 2
- (1) Write in brief about the pathogenesis of Rota virus ?
  - (2) Write a brief note on Influenza.
- (c) Answer in detail : (any **one**) 3
- (1) Discuss transmission, symptoms and control of Swine flu.
  - (2) Discuss transmission, symptoms and control of various types of Hepatitis virus.
- (d) Write a note on : (any **one**) 5
- (1) Pathogenicity, diagnosis, treatment and prevention of *Entamoeba histolytica* infection.
  - (2) HIV.