

B.Sc. MEDICAL TECHNOLOGY (OPERATION THEATER) (BOT)**SEMESTER -II EXAMINATION, JUNE-2026****(BOT203) BASIC PATHOLOGY & HEMATOLOGY****[Time allotted: Three Hours]****[Max Marks: 100]****Note:** Read all the instructions carefully

Answer all questions in serial order, Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All)**(10 x 02 = 20)**

(Very short/ Short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

- a. Which of the following affects ESR value-
 - i. Albumin
 - ii. Packed cell volume
 - iii. Fibrinogen
 - iv. All of the above
- b. Specific gravity of urine is measured by
 - i. Urinometer
 - ii. Rothera's test
 - iii. Benzidine test
 - iv. Hay's Sulphur test
- c. Which inflammatory cell is raised in acute inflammation?
 - i. Lymphocyte
 - ii. Plasma cell
 - iii. Neutrophil
 - iv. Eosinophil
- d. Which is not Romanowsky dyes:
 - i. Wright's stain
 - ii. MGG
 - iii. Giemsa
 - iv. Gram's stain
- e. The percentage of sodium citrate used for collection of blood sample for coagulation studies is:
 - i. 3.8%
 - ii. 3.2%
 - iii. 100%
 - iv. 1.2%
- f. Cause of eosinophilia are all except-
 - i. Allergy
 - ii. Tuberculosis
 - iii. Asthma
 - iv. Parasitic infestation
- g. Glucose in urine is measured:
 - i. Urinometer
 - ii. Rothera's test
 - iii. Benedicts test
 - iv. None of the above.
- h. Which is not a chemical test of urine:
 - i. Protein
 - ii. Glucose
 - iii. Bile salt
 - iv. Urea
- i. ESR is measured by-
 - i. RBC pipette
 - ii. WBC pipette
 - iii. Westergren pipette
 - iv. Neubauer's chamber
- j. Screening of which disease is done before blood donation?
 - i. HIV
 - ii. Hepatitis C
 - iii. Hepatitis B
 - iv. All of the above

Q. 2. Short notes/ Short answer type questions (Attempt any Five)**(05 x 04 = 20)**

- a. Labelled diagram of Eosinophil (CO-2)
- b. Discuss landsteiner's law in blood grouping (CO-3)
- c. Platelet count (CO-2)
- d. Chemical examination of Urine
- e. Steps of Tissue processing (CO-1)
- f. Draw a labelled diagram of Neutrophil (CO-2)
- g. Mediators of inflammation

Q. 3. Structured questions (Attempt any Three)**(03 x 10 = 30)**

- a. Classify Anemia and discuss Megaloblastic anemia (CO-2)
- b. List the Romanowsky dyes, preparation; staining procedures of blood smears? (CO-1)
- c. Extrinsic pathway of Coagulation
- d. Methods of Haemoglobin estimation (CO-2)

Q. 4. Long Answer/ Essay type questions (Attempt any Two)**(02 x 15 = 30)**

- a. Write a note on Transfusion reactions. Which diseases are screened before donation of blood? (CO-3)
- b. Write the Haemocytometric method for estimation of leucocytes (TLC)? What could be errors associated with the same? (CO-2)
- c. Tabulate various pre analytical errors you encounter related to blood samples collected in vacutainers that are received by laboratory? What all errors can occur if they are not checked during sample receiving? List of various vacutainer used in Phlebotomy (CO-4)