

B.Sc. (NEP) Sem.-5 Examination  
DSC-C-352

Health & Hygiene  
November-2025

Time : 2-00 Hours]

[Max. Marks : 50

- Instructions:** (1) Draw figures where necessary.  
(2) Show question number against each answer.  
(3) Figures in right are marks.

Q1. Write a detailed note on Principles and Objectives of Microbiological Techniques such as Microscopic Examination, Culture, Isolation, and Sensitivity Testing. (10)

OR

Q1(A) Explain the Microscopic Blood Count technique and its importance in diagnosis. (05)

Q1(B) Write a note on Cytochemical localization and Histological Examination techniques. (05)

Q2. Describe in detail the Principles and Objectives of Immunological Tests such as Widal, VDRL, ELISA, and Radioimmunoassay. (10)

OR

Q2(A) Write a short note on Immunodiffusion and Immunofluorescence techniques. (05)

Q2(B) Explain the RAST test and its clinical applications. (05)

Q3. Write an explanatory note on Principles and Objectives of Biochemical and Enzymatic Assays used in routine Blood and Urine tests. (10)

OR

Q3(A) Explain the PCR. (05)

Q3(B) Write a note on Genomic sequence. (05)

Q4. Discuss overview of medical evidence. (10)

OR

Q4(A) Explain the analysis of pesticide & Alcohol (05)

Q4(B) Write a note on Genetic Profiling and its applications. (05)

**Q5. Write any ten of the following: (10 marks)**

- 1) What is the principle of culture and isolation technique?
- 2) Name one test used for detection of typhoid fever.
- 3) Which immunological test is used for detection of syphilis?
- 4) What is the full form of ELISA?
- 5) Name one radioimmunoassay used in hormonal estimation.
- 6) Which technique is used to count blood cells automatically?
- 7) What is the principle of PCR?
- 8) Name one modern molecular diagnostic tool.
- 9) What is the function of Flow Cytometry?
- 10) Name any one biochemical test for urine analysis.
- 11) Which forensic test is used for DNA identification?
- 12) Name one toxic substance analyzed in forensic science.

