

(FOR THE CANDIDATES ADMITTED

23UZY5E3

DURING THE ACADEMIC YEAR 2023 – 2026 ONLY)

REG.NO.

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI
END-OF-SEMESTER EXAMINATIONS: NOVEMBER 2025

B.Sc Zoology(AIDED)

MAXIMUM MARKS: 75

SEMESTER - V

TIME : 3 HOURS

PART - III

23UZY5E3 – HAEMATOLOGY AND CLINICAL PATHOLOGY

SECTION – A (10 × 1 = 10 marks)

Answer the following questions.

1. Which method is commonly used for preparing a thin blood film?
a) Blotting method b) Smear method c) Rolling method d) Drop and dry method
2. The total count of red blood cells is carried out using_____
a) Haemocytometer b) Spectrophotometer c) Microscope slide d) Colorimeter
3. What is the main purpose of a glucose tolerance test?
a) To measure cholesterol b) To assess urea levels c) To diagnose diabetes d) To detect anaemia
4. Which test is useful in identifying bilirubin in urine?
a) Fehling's test b) Rothera's test c) Ehrlich's test d) Fouchet's test
5. What type of immune cells destroys cells that have been infected with viruses?
a) B-cells b) Neutrophils c) T-helper cells d) Platelets

Answer the following in one word or a sentence: (5 × 1 = 5 marks)

6. Why is venous blood preferred for biochemical analysis?
7. How is the Sahli's method different from the Cyanmethaemoglobin method in Hb estimation?
8. Mention one clinical use of a glucose tolerance test.
9. State any one symptom commonly observed in Vitamin B12 deficiency anaemia.
10. What are two routes of HIV transmission in healthcare settings?

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Explain the steps in preparing and staining a blood smear.
(OR)
b) Discuss the role of ammonium oxalate in haematological investigations.

12. a) Describe the procedure for estimating hemoglobin using Cyanmethaemoglobin method.
(OR)
b) Compare RBC and WBC total count procedures using a Neubauer chamber.
13. a) Pointout the oral glucose tolerance test with interpretation.
(OR)
b) Assess the postprandial blood glucose used in diagnosing diabetes mellitus.
14. a) Describe the diagnostic indicators for iron deficiency anaemia and their interpretations.
(OR)
b) Outline the significance of liver function tests in clinical diagnosis.
15. a) List the stages of HIV infection with clinical signs.
(OR)
b) Classify the different types of jaundice based on lab values?

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS

16. (a) Summarize the examination and interpretation of a stained blood film under a microscope.
(OR)
(b) Outline the protocol for capillary and venous blood collection with precautionary measures.
17. (a) Pointout the estimation procedures involved in ESR and their clinical uses.
(OR)
(b) Design an experimental setup to estimate the total WBC count in a sample and investigate the expected values of an infected sample.
18. (a) Analyze the variations in blood sugar levels using glucose tolerance tests and their diagnostic relevance.
(OR)
(b) Explain the biochemical estimation of blood urea and its relevance in kidney functions.
19. (a) Describe the causes, clinical signs, and lab findings in Vitamin B12 deficiency anaemia.
(OR)
(b) Summarize bilirubin metabolism and explain the liver's role in processing bilirubin.
20. (a) Examine the pathogenesis and lab diagnosis techniques of HIV/AIDS.
(OR)
(b) Design a healthcare strategy to prevent HIV transmission in a rural diagnostic lab setting.
