STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI - 600 086
(For candidates admitted from the academic year 2023 – 2024 & thereafter)

B. Sc. DEGREE EXAMINATION, APRIL 2026
BRANCH VI.A. – ADVANCED ZOOLOGY AND BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : MAJOR ELECTIVE
PAPER : MEDICAL LABORATORY TECHNOLOGY
SUBJECT CODE : 23ZL/ME/LT45
TIME : 3 HOURS MAX. MARKS: 100

Q. No.	SECTION A Answer all questions (10 x 2 = 20 marks)	CO	KL
1.	State any two Good Laboratory Practices (GLP).	CO1	K1
2.	Name any two anticoagulants used in blood collection and mention their function.	CO1	K1
3.	What is erythropoiesis?	CO1	K1
4.	Draw and label any two types of white blood corpuscles.	CO1	K1
5.	What are artificial blood substitutes?	CO1	K1
6.	Distinguish between bleeding time and clotting time.	CO1	K1
7.	What is oligopsermia?	CO1	K1
8.	List the pathological symptoms of Tuberculosis.	CO1	K1
9.	What is the significance of ALT?	CO1	K1
10.	Define hypercholesterolemia.	CO1	K1
Q. No.	**SECTION B** **Answer all questions (10 x 2 = 20 marks)**	**CO**	**KL**
11.	Differentiate between venous and capillary blood collection.	CO2	K2
12.	What is the purpose of using WBC diluting fluid in leucocyte counting?		
13.	State the principle of Sahli's method of haemoglobin estimation.	CO2	K2
14.	What is ESR and name the method commonly used to estimate it.	CO2	K2
15.	What is the principle behind ABO blood grouping?	CO2	K2
16.	Comment on the criteria for blood donation.	CO2	K2
17.	Name any two protozoan intestinal parasites detected by stool examination.	CO2	K2
18.	Relate the presence of microfilariae in blood smear to the time of blood collection.	CO2	K2

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19.	Give the normal range of fasting blood sugar in adults.	CO2	K2
20.	Why are high AST values considered an indicator of organ injury?	CO2	K2
Q. No.	**SECTION C** **Answer any TWO questions. (2 x 10 = 20 marks)**	**CO**	**KL**
21.	Outline the process of sterilization of laboratory apparatus and discuss its significance.	CO3	K3
22.	Explain how CSF analysis is used to confirm the diagnosis of meningitis.	CO3	K3
23.	Examine elevated serum urea and creatinine values and correlate them with renal disorders.	CO3	K3
Q. No.	**SECTION D** **Answer any TWO questions. (2 x 15 = 30 marks)**	**CO**	**KL**
24.	Explain the morphological variations of red blood cells in different types of anaemia.	CO4	K4
25.	Elucidate the immunohaematological principles involved in blood transfusion and evaluate the complications associated with incompatibility.	CO4	K4
26.	Analyse the macroscopic, microscopic and chemical examination of urine and explain their importance in diagnosing diseases.	CO4	K4
Q. No.	**SECTION E** **Answer any TWO questions. (2 x 5 = 10 marks)**	**CO**	**KL**
27.	Evaluate the importance of biomedical waste management in preventing hospital-acquired infections.	CO5	K5
28.	Discuss the mode of infection, pathogenesis and laboratory diagnosis of AIDS.	CO5	K5
29.	Critically assess the role of PAP smear in reducing the incidence of cervical cancer.	CO5	K5

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