

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch - BIOCHEMISTRY

ADVANCED CLINICAL BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	What machine is used to test the blood? a) Auto analyzer b) Hemodialyzer c) Diathermy machine d) Ventilator	K1	CO1
	2	If a person has AB- blood, who all can donate blood to him? a) A+, B-, O-, AB+ b) A-, B-, O+, AB+ c) A+, B+, O+, AB- d) A-, B-, O-, AB-	K2	CO1
2	3	Which drug is indicated for pain related to acute renal calculi? a) Salicylates b) NSAIDS c) Narcotic analgesics d) Muscle relaxants	K1	CO2
	4	Which of the following is the term given to the condition of RBCs in urine? a) Haematuria b) Pyuria c) Haemoglobinuria d) Proteinuria	K2	CO2
3	5	Hypothyroidism causes in an adult is due to _____ a) Obesity b) Diabetes c) Cretinism d) Myxoedema	K1	CO3
	6	Lack of which hormone causes Addison's disease? a) Glucocorticoids b) Oxytocin c) Insulin d) Norepinephrine	K2	CO3
4	7	Which of the following clinical condition does not show increase of amylase concentration? a) Diabetic ketoacidosis b) Cardiac arrest c) Salivary gland disorders d) Ruptured ectopic pregnancy	K1	CO4
	8	Which vaccine is given to prevent Hepatitis B infection? a) BCG Vaccine b) Sabin Vaccine c) Salk Vaccine d) Recombivax HB	K2	CO4
5	9	Which of the following is a symptom for diabetes mellitus? a) Fever b) Bones panning c) Cold and cough d) Kussmals respirations	K1	CO5
	10	Deposition of the plaque in the blood vessels is called as a) Atherosclerosis b) Multiple Sclerosis c) Tunica Media d) Tunica Intima	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks $(5 \times 7 = 35)$

Module No.	Question No.	Question	K Level	CO
1	11.a.	Give the procedure involved in the rheumatoid arthritis test.	K2	CO1
		(OR)		
	11.b.	Infer the composition, analysis and diagnostic importance of cerebrospinal fluid.		
2	12.a.	Develop the biochemical investigation of sputum.	K3	CO2
		(OR)		
	12.b.	Construct the clinical significance of urine components with special reference to bilirubin and porphyrins.		
3	13.a.	Organize the laboratory methods for evaluation of pituitary hormones.	K3	CO3
		(OR)		
	13.b.	Identify the principle of protein hormone assay and their clinical significance.		
4	14.a.	Examine the clinical significance of LDH, CPK and their pattern in myocardial infarction.	K4	CO4
		(OR)		
	14.b.	Analyze the renal creatinine clearance test and its clinical significance.		
5	15.a.	Categorize the different types of glycogen storage diseases.	K4	CO5
		(OR)		
	15.b.	Examine the disorders of potassium metabolism.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the different types of viral markers.	K4	CO1
2	17	Examine the composition of kidney stones and procedure for stone analysis.	K4	CO2
3	18	Assess the principle of steroid hormone assay and their clinical significance.	K5	CO3
4	19	Explain the aetiology and types of liver cirrhosis.	K5	CO4
5	20	Elaborate the clinical features and biochemical correlations, complications of type II diabetes mellitus.	K6	CO5

Z-Z-Z END