

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024  
(Sixth Semester)

Branch – BIOCHEMISTRY

CLINICAL BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Which of the following statements is correct?
  - (i) Insulin suppresses the activity of glycogen synthase
  - (ii) Insulin mediates glucose uptake in the brain
  - (iii) "Prediabetes" is a condition characterized by an increased risk for the future development of type 2 diabetes
  - (iv) The rise in insulin concentration after meal ingestion is reduced in type 1 but not in type 2 diabetes
  
- 2 What is the primary lipoprotein secreted from the liver that is at least partially composed of dietary derived lipids?
 

(i) Chylomicrons	(ii) HDL
(iii) VLDL	(iv) LDL
  
- 3 Which of these is a hereditary disease caused due to an error in amino acid metabolism?
 

(i) Homocystinuria	(ii) Albinism
(iii) Phenylketonuria	(iv) Branched-chain ketoaciduria
  
- 4 What is the catabolic end product of purine nucleotide?
 

(i) Uric acid	(ii) NH <sub>3</sub>
(iii) CO <sub>2</sub>	(iv) Both (i) and (ii)
  
- 5 Which of the following disease is caused due to the deficiency of the iodine?
 

(i) Solitary Thyroid Nodules	(ii) Thyroid Cancer
(iii) Goitre	(iv) Thalassemia

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the hypoglycemia.  
OR  
b Discuss the fructosuria.
  
- 7 a Elaborate the steatorrhea.  
OR  
b Prepare a note on Tay-Sachs syndrome.
  
- 8 a Outline the hartnup disease.  
OR  
b Develop a note on alkaptonuria.
  
- 9 a Explain about Lesch-Nyhan syndrome.  
OR  
b Summarize the Jaundice.

Cont...

- 10 a Elaborate the hyperthyroidism.  
OR  
b Explain the factors affecting the catecholamine levels.

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Elaborate the diabetes.  
OR  
b Discuss the glycogen storage disease.
- 12 a Summarize the hyperlipoproteinemias.  
OR  
b Explain about the types, symptoms and treatment of fatty liver.
- 13 a Elaborate the diagnosis and treatment of cystinuria.  
OR  
b Discuss the cardiac marker enzymes.
- 14 a Elaborate the disorder of bilirubin.  
OR  
b Summarize the diagnosis and treatment of Crigler-Najjar syndrome .
- 15 a Outline the clinical applications of thyroid hormone.  
OR  
b Elaborate the analysis of plasma and urine catecholamines.

Z-Z-Z

END