



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination - January 2021
V Semester

Class : III UG
Major : Biochemistry & Biotechnology

Time : 3 Hours
Max. Marks: 100

18BBCC11 Clinical Biochemistry

Part A
Choose the Correct Answer

10 x 1 = 10

- Name the test used to identify the ketone bodies in urine
 - Rothera's test
 - Benedict's test
 - Hay's Sulphur test
 - Fouchet's test
- Identify the major chemical components in kidney stone
 - Potassium hydroxide
 - Sodium citrate
 - Calcium oxalate
 - Ammonium oxalate
- Find the normal range of blood sugar
 - 60 – 140 mg/dl
 - 80 – 120 mg/dl
 - 60 – 120 mg/dl
 - 80 – 140 mg/dl
- Which enzyme is deficient in the Von Gierke's disease?
 - Debranching enzyme
 - Muscle phosphorylase
 - Acid maltase
 - Glucose- 6- phosphatase
- Select the one related to A beta lipoproteinaemia
 - Absence of LDL
 - Presence of HDL
 - Presence of VLDL
 - Absence of IDL
- Name the Apo lipoprotein present in the Chylomicron
 - Apo - A_I
 - Apo - C_{II}
 - Apo - D
 - Apo- B₄₈
- Identify the enzyme deficient in Alkaptonuria condition
 - Transaminase
 - Homogentisate oxidase
 - Tyrosinase
 - Cystathionine synthetase
- Select the normal Prothrombin time
 - 15 Sec
 - 16 Sec
 - 14 Sec
 - 12 Sec
- Which one is related to Addison's disease ?
 - Low Serum Na⁺ and High Serum K⁺
 - High Serum Na⁺ and Low Serum K⁺
 - Low Serum Na⁺ and Low Serum K⁺
 - Hgh Serum Na⁺ and High Serum K⁺
- Find the normal range of λ or gamma - Glutamyl transferase
 - 10 – 45 IU/L
 - 10 – 55 IU/L
 - 10 – 65 IU/L
 - 10 – 75 IU/L

Part B
Answer ALL questions
Each answer should not exceed 400 words or two pages

5 x 6 = 30

- 11.a. Write short notes on Glomerular diseases.
(or)
- 11.b. Outline the composition and clinical significances of Urinary calculi.
- 12.a. Illustrate the clinical conditions and types of Jaundices.
(or)
- 12.b. Explain Glucose Tolerance Test and its clinical significances.
- 13.a. What is Hypolipoproteinemia? Explain with example.
(or)
- 13.b. Discuss in detail on Hypertension and its complications.
- 14.a. Write short notes on Gout.
(or)
- 14.b. Outline the Maple syrup disease with its significances.
- 15.a. List out the clinical significances of λ - Glutamyl transferase.
(or)
- 15.b. Explain the electrolyte imbalance in the Hyponatremia condition.

Part C
Answer ALL questions
Each answer should not exceed 800 words or fourpages

5 x 12 = 60

- 16.a. Examine the test that measure GFR with reference to creatinine clearance test.
(or)
- 16.b. Discuss in detail on elementary principles of Dialysis.
- 17.a. Explain the role of various plasma enzymes in Liver disease.
(or)
- 17.b. Elaborate the biochemical aspects of Glycogen storage disease.
- 18.a. Outline the abnormalities of Hyperlipoproteinemia.
(or)
- 18.b. Write in detail on types and clinical significances of Fatty liver.
- 19.a. Illustrate the mechanism of Blood coagulation.
(or)
- 19.b. Explain the biochemical findings of Phenylketonuria and Alkaptonuria.
- 20.a. Discuss in detail on clinical significances of Creatine phosphokinase.
(or)
- 20.b. Examine the clinical complications of Hyper and Hypokalemia.
