

BCH 410 NUTRITIONAL AND CLINICAL BIOCHEMISTRY

Time: 2.30 Hrs]

[Max Marks: 70

Instructions: Illustrate your answers with neat diagrams wherever necessary.

Que 1 Write the following

- (i) Explain what BMR is? Also, can you discuss the various factors that affect BMR? (7 Marks)
- (ii) What is the difference between fat-soluble and water-soluble vitamins? Also, write diseases that are due to water-soluble deficiency. (7 Marks)

OR

- (i) Discuss any mineral deficiency and its requirement for different age groups. (7 Marks)
- (ii) Write a short note on the role of calcium in our body in detail. (7 Marks)

Que 2 Write the following

- (i) Explain the urea cycle with a proper diagram. Also, write its importance. (7 Marks)
- (ii) Write aetiology, clinical features, and management of marasmus. (7 Marks)

OR

- (i) What is an anaemic condition? Discuss any one type of anemia in detail. (7 Marks)
- (ii) Discuss any three renal function tests in detail. (7 Marks)

Que 3 Write the following

- (i) Explore the functions of different types of lipoproteins, including chylomicrons, VLDL, LDL, and HDL. How do these lipoproteins contribute to lipid transport, metabolism, and overall health? (7 Marks)
- (ii) Write a short note on the Lysosomal storage diseases. (7 Marks)

OR

- (i) Which apolipoproteins are present in HDL? Explain the reverse cholesterol transport mechanism. (7 Marks)
- (ii) Classify the Lipoproteins and explain VLDL in detail. (7 Marks)

Que 4 Write the following

- (i) Write briefly about Dental carries. (7 Marks)
- (ii) What is Diabetes Mellitus condition? Write the dietary goals of Diabetes Mellitus. (7 Marks)

OR

- (i) What is Dyslipidaemia? Write about the risk factors of Atherogenesis. (7 Marks)

(ii) Discuss Phenyl Ketonuria in detail.

(7 Marks)

Que 5 Attempt any seven out of twelve

(14
Marks)

- (i) Which enzyme is defective in Type IIA Familial hypercholesterolemia?
- (ii) Give the name of fat-soluble vitamins.
- (iii) Write any 2 foods with a low Glycaemic Index.
- (iv) How does lipoprotein lipase facilitate the hydrolysis of triglycerides in circulating lipoproteins?
- (v) What is Homocystinuria?
- (vi) Which type of dyslipidemia is characterized by elevated levels of chylomicrons and triglycerides?
- (vii) Which lysosomal storage disease is X-linked?
- (viii) Give RDA of phosphorus for adult subjects.
- (ix) Write any three liver function test
- (x) What is an anabolic reaction? Give one example.
- (xi) What are microminerals?
- (xii) What role do apolipoproteins play in lipoprotein metabolism?

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