

[MBBS 0323]

MARCH 2023

Sub. Code : 6055

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

FIRST YEAR – SUPPLEMENTARY (CBME)

PAPER I – BIOCHEMISTRY

Q.P. Code: 526055

Time: Three hours

Maximum : 100 Marks (80 Theory + 20MCQs)

Answer All Questions

I. Essay:

(2 x 15 = 30)

1. A 21-year-old woman who recently began taking birth control pills presents to the emergency room with cramping abdominal pain, anxiety, paranoia, and hallucinations. A surgical evaluation, including ultrasound and computed tomography scan, fails to demonstrate an acute abdominal process. An urinalysis reveals an increase in urine ALA and PBG.
 - a) What is your probable diagnosis?
 - b) Which enzyme deficiency leads to this condition?
 - c) Explain in detail the metabolic pathway that is defective in this patient.
 - d) What is the biochemical basis of the clinical features?
 - e) Give reasons for the development of symptoms after taking birth control pills.
2. How are dietary lipids digested and absorbed? Explain how lipids are transported in plasma.

II. Write short notes on:

(10 x 5 = 50)

1. Chemiosmotic theory of Oxidative Phosphorylation.
2. Polyol pathway and its importance in the pathogenesis of complications of Diabetes Mellitus.
3. Competitive inhibition of enzyme activity.
4. A 10 year old boy had difficulty in vision at night. However his vision was quite normal during day time except when he entered a dimly lit room. On investigation, his plasma retinol levels were found to be low.
 - a) Suggest the probable diagnosis. Which nutrient deficiency causes this disease?
 - b) Enumerate any four functions of the nutrient.
 - c) Write a note on Walds visual cycle.
5. Biological value of Proteins.
6. Enumerate the compounds derived from cholesterol and mention their biochemical functions.
7. Why is Kreb's cycle anabolic in nature?
8. Role of insulin and glucagon in the regulation of glycogen metabolism.
9. Glycogen Storage Disorders.
10. Structure and functions of Mitochondria.
