Date: 01-08-2018
0819E373
First Year MBBS Examination
I MBBS Biochemistry Paper 1
Time: 3 hours
Max Marks: 50

Instructions:

1. Answer to the points.
2. Figure to the right indicates marks.
3. Use separate answer books for each section.
4. Draw diagrams wherever necessary.
5. Write legibly.

Section 1

1.Write short notes on the following

a) Metabolic acidosis (A. 402) (C.481) (10)

b) Lactose intolerance

c) Fatty liver and lipotropic factors (A.

204) (C.322)

2.Write Short notes of (any three)

a) Biomedical importance of any two (9) mucopolysaccharides

b) Competitive inhibition of enzymes. (A. 63) (C. 92)

c) Nutritional classification of fatty acids and their importance(C.509)

d) Clinical manifestations of any two porphyrias (A. 328) (C. 212)

e) Therapeutic uses of enzymes(A. 84) (C. 105)

3.Discuss Any TWO

a) Appications of Radioimmunoassay(6) (A. 436) (C.729)

b) Role of any two blood buffers(A. 398) (C. 475)

c) Role of clearance tests in kidney function(A. 370) (C.460)

Section 2

4.Write Short notes on (any two)

a) Biochemical changes in atherosclerosis (10)

b) glycolysis-aerobic and anaerobic(A.128) (C. 245)

c) B-oxidation of palmitic acid(A. 191) (C.287)

5.Write Short notes on (any two)

a) Air pollutants(A. 534) (C. 663) (9)

b) Chemical carcinogens (A. 662) (C.667)

c) Inhibitors of Electron transport chain 9ETC) (A. 320) (C.232)

d) Immunoglobulin G (Ig G)(A. 649) (C. 187)

e) Therapeutic application of radiosotopes

6.Case report:

(6)

A 34 years male with high grade fever and shivering was admitted to the

hospital on treatment with antimalarial drugs fever subsided but he developed acute haemolytic crisis, signs of anemia, pallor of the skin and the mucus membrane. Oedema feet jaundice. The patient noticed dark coloured urine. Laboratory investigations revealed reduced haemoglobin levels. Reticulocyte count 6.5% (N=upto 2%), Serum total bilirubin 9.6 mgs/dl (N=.2- 1.0 mgs/dl). Activity of glucose 6 phosphate dehydrogrnase (G6PD) was found deficient. Answer the following questions (any six).

1) State the biochemical basis of development of haemolytic disease in this patient.

2) What is glutathione and what is its role in the body?

3) How does glutathione fail to perform

its function following administration of antimalarial drugs?

4) Comment on why the dark coloured urine is observed.

5) Does the disorder affect the other tissues of the body? Explain

6) Does G6 PD deficiency in this patient offer any advantage? If yes Explain

7) Name any antimalarial drug responsible for this condition

8) Name any abnormal test result in this case suggesting hemolysis