

Date: 07-04-2022

0819E373

First Year MBBS Examination

I MBBS Biochemistry Paper 1

Time: 3 hours

Max Marks: 100

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. Answer any one

(10)

a) What are the irreversible steps of

glycolysis and how they are circumvented in gluconeogenesis? Explain the importance of key enzymes of gluconeogenesis in the metabolism of lactate. How the process of gluconeogenesis is regulated?

b) What are the different types of haemoglobinopathies? Write about the biochemical basis of haemoglobinopathies and their clinical relevance.

2. Answer any two (case based scenario/applied short notes) (12)

a) A boy aged 9 years came with his mother with the complaints of bloating abdomen, passing of loose clay coloured, frothy, foul smelling stool. His stool fat analysis showed presence of monoacyl glycerol and diacyl glycerol. (a) What is your diagnosis? (b) Which biochemical tests you will perform to confirm the diagnosis? (c)

Mention the role of bile salt in digestion.

b) What are the different types of immunoglobulins? Write the structure and function of each.

c) What are the different components of electron transport chain? Briefly describe chemiosmotic theory.

3. Write short notes (answer any three)

(18)

a) What is HMP shunt pathway?

Describe how it is important in maintaining the integrity of erythrocyte.

b) What do you understand by mutarotation? Describe it with example.

c) Write briefly about physiological jaundice in new born?

d) What are the four types of doctor patient relationships? Write the factors affecting doctor patient relationship.

4. Answer in 2-3 lines (give biochemical justification) five out of six (10)

a) Sick cell anaemia gives protection against malaria.

b) Ingestion of large amount of fructose potentiates hyperuricaemia.

c) AST and LDH are raised in prehepatic jaundice.

d) Creatinine clearance is better than urea clearance.

e) Cori's cycle is incomplete in Von Gierke's disease.

~~**f)** Trans fatty acids are injurious to health.~~

Section 2

5. Answer any one (10)

a) What is the normal pH of blood? What are the different mechanisms of blood pH regulation? Describe the renal mechanism of pH regulation.

b) Write the steps of synthesis of cholesterol? How the synthesis is regulated? Write a note on normal lipid profile.

6. Answer any two (case based scenario/applied short notes) (12)

a) Role of radioisotope in medicine.

b) Write a note on allosteric enzymes with example.

c) Cyt P 450.

7. Write short notes (answer any three)

(18)

- a) RTPCR.**
- b) Suicide enzyme inhibition**
- c) Regulation of Ketogenesis**
- d) Tumour suppressor genes**

8. Answer in 2-3 lines (give biochemical justification) five out of six

(10)

- a) Importance of HDL in cholesterol transport.**
- b) Anion gap.**
- c) Oral rehydration therapy.**
- d) Difference between INSULIN and INULIN.**
- e) Causes of fatty LIVER.**

f) Marine Fish oil is Cardioprotective.

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