

Part B (20 Marks)

01.

1.1 Name the intermediates form before the entry of fructose to glycolytic pathway. (04 marks)

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1.2 Name the energy sources produced in the glycolytic pathway. (02 marks)

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1.3 Explain why lactate is formed in anaerobic glycolysis. (04 marks)

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02.

2.1 Name the four types of classification for amino acids. (04 marks)

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2.2 What is meant by the isoelectric point of an amino acid? (04 marks)

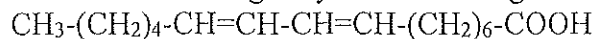
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2.3 How peptides are formed? (02 marks)

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Part C (60 Marks)

01.

1.1 Name the following fatty acid according to omega (ω) system. (03 marks)

1.2 Explain why fatty acids are amphipathic in character. (04 marks)

1.3 The eicosonoids form four (04) active groups. Name those four (04) groups. (08 marks)

02.

2.1 α -Helix is one the secondary structures of protein. Name the other secondary structures of protein. (04 marks)2.2 Explain the structural arrangement of α -helix. (08 marks)

2.3 Explain what is meant by protein denaturation. (03 marks)

03.

Michaelis Menton equation is given below.

$$V = \frac{V_m[S]}{K_m + [S]}$$

3.1 Name each term in the equation. (04 marks)

3.2 Using Michaelis Menton equation, derive an equation to make the Lineweaver-Burk plot. (06 marks)

3.3 In enzyme catalysis, enzyme-substrate complex is formed. Name the factors contributing to catalysis. (05 marks)

04.

4.1 Where insulin is synthesized? (03 marks)

4.2 Name four (04) pathways activated by insulin. (04 marks)

4.3 Name the vitamers of vitamin A. (03 marks)

4.4 Vitamin C is an antioxidant. Explain this using a chemical reaction. (05 marks)