

THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
ACADEMIC YEAR 2018/2019 – SEMESTER II
BACHELOR OF PHARMACY HONOURS
FMU3300-BIOCHEMISTRY-LEVEL 3
FINAL EXAMINATION
DURATION: 3 HOURS



DESB 07000
EXAMINATION DIVISION

1

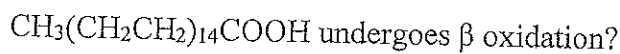
DATE: 05TH OF NOVEMBER 2019

TIME: 9.30 A.M.-12.30 P.M.

(20 MARKS)

1.

1.1. How many acetyl CoA molecules will be produced when palmitic acid -

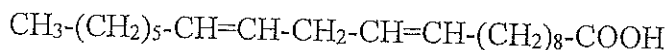


(03 marks)

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1.2. Name the fatty acid according to omega (ω) system.

(04 marks)



.....

1.3. Arachidonic acid is called an essential fatty acid. Briefly explain.

(03 marks)

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.....
.....

2.

2.1. List five (05) factors that affect the rate of an enzyme activity.

(05 marks)

- I.
- II.
- III.
- IV.
- V.

2.2. Draw a graph to illustrate the effect of pH on enzyme activity.

(05 marks)

Index No.....

Part C – (60 Marks)**Answer all questions.**

1.

1.1. Briefly explain the benefit of the ketone body, β hydroxybutyrate (β HBA).
(05 marks)

1.2. Briefly explain why fat synthesizing tissues carry out Hexose Monophosphate (HMP) pathway instead of Tricyclic Carboxylic Acid (TCA) cycle for oxidation of glucose.
(10 marks)

2.

2.1. List three (03) types of secondary structures of proteins. (06 marks)

2.2. Briefly explain the types of secondary structures of proteins mentioned in 2.1.
(09 marks)

3.

3.1. Name two (02) main types of coarse control mechanisms used for regulation of metabolism. (05 marks)

3.2. "Hemoglobin is a better oxygen transporter than myoglobin". Briefly describe this using the oxygen affinity curve of the two proteins. (10 marks)

4.

4.1. State the reason for development of "Kwashiokor". (05 marks)

4.2. What is an "allosteric enzyme"? (05 marks)

4.3. What is meant by covalent modification of an enzyme? (05 marks)