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SECOND SEMESTER EXAMINATION 2016/2017 SESSION

COURSE TITLE: Metabolism of Lipids

DURATION: 2 hours

COURSE UNIT: 2

COURSE CODE: 210

HOD'S SIGNATURE

Instruction: Answer four (4) Questions

1. Describe the fate of GLYCEROL during triglyceride catabolism.
 - a. List the classes of lipids and give three (3) examples of each.

2. Extensively describe beta-oxidation of fatty acid.
 - a. Mention five (5) functions of lipid.

3. With the aid of biochemical pathway describe the biosynthesis of any lipid of your choice.
 - b. What is the difference between retinol and carotenol.

- 4a Using the Fluid Mosaic Model describe membrane structure
- b Name and draw any four (4) membrane lipids.

- 5a What are lipoproteins?
- b List and write short notes on the four (4) major classes of circulating lipoproteins.

- 6a Name the following fatty acids and classify them into saturated and unsaturated fatty acids;
 $\text{CH}_3(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{CO}_2\text{H}$
 $\text{CH}_3(\text{CH}_2)_{12}\text{CO}_2\text{H}$
 $\text{CH}_3(\text{CH}_2)_{16}\text{CO}_2\text{H}$
 $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_7\text{CO}_2\text{H}$
 $\text{CH}_3(\text{CH}_2)_4\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_7\text{CO}_2\text{H}$
- b Succinctly describe one major factor that determines the level of unsaturation of fatty acids.