



**EDO UNIVERSITY, IYAMHO, EDO STATE
FACULTY OF SCIENCE
DEPARTMENT OF BIOCHEMISTRY
SECOND SEMESTER EXAMINATION, 2016/2017 SESSION**

**COURSE CODE: BCH 221
CREDIT UNIT: 3**

**COURSE TITLE: INTRODUCTORY BIOCHEMISTRY II
DATE: 05/09/2017**

TIME: 3HRS

ANSWER ANY FIVE (5) QUESTIONS

- 1(a). Discuss the formation of NADPH using glucose 6-phosphate as the starting material?
- 1(b). Of what importance is NADPH and Ribose 5-phosphate?
- 1(c). Highlight the role of Insulin and Glucagon in regulation of Blood Glucose level.

- 2(a). Show the irreversible steps of Glycolytic pathway?
- 2(b). Show the ATP synthesizing and ATP utilization steps of Glycolysis.
- 2(c). Discuss the Anaerobic fate of Pyruvate

- 3(a). Write briefly on the following: (i) Iron (ii) Zinc (iii) Manganese (iv) Iodine
- 3(b). Highlight the inhibitors of Electron Transport Chain and Oxidative Phosphorylation?
- 3(c). Write briefly on the following Accessory Food Factors: (i) Vitamin C (ii) Vitamin A (iii) Riboflavin (vi) Vitamin K

- 4(a). Using structures, show the steps in Citric Acid Cycle where NADH, CO₂, GTP and FADH₂ are released?
- 4(b). How is Oxaloacetate replenished for Krebs cycle?
- 4(c). Write briefly on Hyperglycemia and Hypoglycemia

- 5(a). A young black man complained of bloating and diarrhea after participating in an ice cream eating contest at a birthday party. The patient also reported same symptoms following ingestion of a significant amount of milk products. Discuss this abnormality in digestion and absorption.
- 5(b). Digestion of carbohydrates begins in the mouth but stops temporarily in the stomach. Explain?

- 6(a). Discuss the emulsification of dietary lipid in the small intestine
- 6(b). Give a detailed description of the Fluid Mosaic model of Bio-membrane

- 7(a). Explain the digestion of proteins by pancreatic enzymes
- 7(b). Urea accounts for about 90% of the nitrogen-containing components of urine. Explain?