

## NATIONAL OPEN UNIVERSITY OF NIGERIA PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI -ABUJA FACULTY OF SCIENCE September 2020\_1 EXAMINATION

BIO 305: MOLECULAR BIOLOGY Time allowed: 2hrs Credit Units: 2 Instruction: Answer FOUR questions only. Question 1 is compulsory.

- 1a. Define the term molecular Biology and state its fundamental application (5marks)
- 1b. Highlight four features of Escherichia *coli* that makes it a suitable experimental model in Molecular Biology (8 marks)
- 1c Explain the term 'Central Dogma' (6marks)
- 1d. Describe the structure of a chromosome (6 marks)
- 2a. What is Metabolism? (3 marks)
- 2b. Give the contributions of the following scientist in the field of Molecular biology: (12 marks)
- i. William Astbury
- ii. Gregor Mendel
- iii. W. Johannsen
- iv. Seymour Benzer
- v. Thomas Morgan
- vi. Watson-Crick
- 3. Discuss the mechanism of chain initiation during protein synthesis (15 marks)
- 4a. Highlight five features of *Saccharomyces Cerevisiae* that makes it a suitable experimental model in Molecular Biology (12 marks)
- 4b. What is a chromosome number? (3 marks)
- 5. Write short note on the following (15 marks)