



NATIONAL OPEN UNIVERSITY OF NIGERIA
14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
JUNE/JULY EXAMINATION

COURSE CODE: BIO305

COURSE TITLE: MOLECULAR BIOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

1a. Outline the importance of genes in heredity.

ii. Write short notes on termination and the kreb citric acid cycle

bi. Highlight the roles of DNA and RNA

ii. Describe the central dogma.

2ai. What is nucleic acid hybridisation?

ii. Write short notes on the following: (i) a cistron (ii) muton (iii) recon

bi. List the major components of a nucleotide.

ii. Describe how hormones control gene-expression.

3ai. Describe the various steps involved in the process of chain elongation stage during protein synthesis..

ii. What is DNA sequencing?

b. Briefly describe any two methods for determining DNA sequences.

4a. What is molecular biology.

ii. Outline the relationship of molecular biology to other biological sciences.

bi. What do you understand by the term chromosomes?

ii. *Escherichia coli* are useful in molecular biology. Discuss.

5ai. Define DNA.

ii. Write short notes on the following:

(i) t RNA (ii) r RNA (iii) m RNA

bi. Define gene-expression.

ii. Outline the characteristics of genetic code.

6ai. What do you understand by the term catabolism?

ii. Outline the important features of glycolysis.

bi. Enumerate the stages involved in the breakdown of glucose.

ii. Describe the process of oxidative phosphorylation