



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS
WAY, JABI - ABUJA.
FACULTY OF SCIENCE
Department of Biological Sciences
2023_1 POP EXAMINATION.

BIO 305: Molecular Biology

TIME: 2 Hours

Credit: 2 Units

INSTRUCTION: Answer THREE questions in all. Question 1 is compulsory

1a Using at least 3 points each, compare and contrast the deoxyribonucleic acid and the ribonucleic acid (12 marks)

1b. Give the complementary codons in the messenger RNA for the following CODONS:

- i. AAA
- ii. TAT
- iii. GGG
- iv. TCA
- v. AGG (5marks)

1c. State 3 differences between the Catabolism and Anabolism (8marks).

1d. Explain the role of cistron in genetics (5 marks)

2. Give a brief account on the nature and role of genes(20marks)

3. Discuss the significance of Deoxynucleic acid in the effective transfer of information in the replication of cells (20marks)

4a. Expatriate on the final stage of Translation (10 marks)

4b. Discuss the importance of TATA box transcription (10 marks)

5a State the part of the cell in which Krebs Citric Acid Cycle occurs. (1 mark)

5b. Mention the stages involved in the complete catabolism of glucose (4marks)

5c. Discuss the fate of the pyruvic acid produced during glycolysis under aerobic conditions (15 marks)