



**ELIZADE UNIVERSITY, ILARA-MOKIN,
ONDO STATE, NIGERIA**

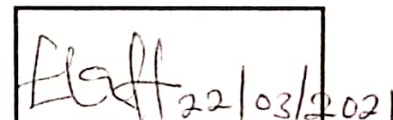
**BASIC & APPLIED SCIENCES
BIOLOGICAL SCIENCES
FIRST SEMESTER EXAMINATION
2020/2021 ACADEMIC SESSION**

COURSE CODE: BTH 201

**COURSE TITLE: INTRODUCTION TO BIOTECHNOLOGY AND
GENETIC ENGINEERING**

COURSE UNIT: 3 UNITS

DURATION: 2 HOURS

 22/03/2021

HOD's SIGNATURE

NAME:.....

MAT. No:.....

INSTRUCTIONS

Answer all questions in section A

Answer any two questions from section B

Note: All questions and sections carry EQUAL marks!

SECTION A

1. (a) What is Recombinant DNA Technology **(2 marks)**
(b) Describe how a gene of interest could be artificially clones using the Recombinant DNA Technology **(8 marks)**
(c) Briefly explain how bacteria cell can be selected after transformation in Recombinant DNA Technology **(5 marks)**
2. (a) Describe the application of Biotechnology in the following fields **(2 marks each)**
 - i. Agriculture;
 - ii. Medicine;
 - iii. Environment;
 - iv. Food industry;
 - v. Chemical Industry;
(b) What are the advantages and disadvantages of biotechnology? **(5 marks)**

SECTION B

1. (a) Explain the prerequisites for genetic modification in organisms. **(10 marks)**
(b) Define traditional and modern biotechnology, highlighting the major differences. **(5 marks)**
2. (a) Mention five (5) reasons why we ferment food **(5 marks)**
(b) Explain transduction and electroporation as a mode of transfer of desired gene **(5 marks)**
(c) Briefly explain conjugation and mutagenesis as tools in traditional biotechnology **(5 marks)**
3. (a) i. With emphasis on location, explain with examples the different types of enzymes that you know. **(5marks)**
ii. What are the properties of a useful industrial microbe? **(3marks)**
(b) Describe the properties of secondary and primary metabolites; giving examples of products **(5marks)**
(c) Mention microbial products of industrial interest **(2marks)**