

## ELIZADE UNIVERSITY, ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

**DEPARTMENT: BIOLOGICAL SCIENCES** 

FIRST SEMESTER EXAMINATION

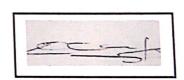
2018/2019 ACADEMIC SESSION

**COURSE CODE: BTH 201** 

COURSE TITLE: INTRODUCTION TO BIOTECHNOLOGY AND

**GENETIC ENGINERING** 

**DURATION: 2 HOURS** 



**HOD's SIGNATURE** 

NAME:	
MAT. No:	

## **INSTRUCTIONS**

Answer all questions in section A
Answer two questions in section B

Note: All questions and sections carry EQUAL marks!

## SECTION A

- 1. a. Using notable scientific/biological events, describe the following stages of biotechnology
  - i. Ancient biotechnology
  - ii. Classical biotechnology
  - iii. Modern biotechnology
  - b. i. What are the advantages and disadvantages of Polymerase Chain Reaction (PCR)?
    - ii. What are the terms use to describe the following condition during PCR analysis?
      - (a) 94°C for 5 minutes (b) 54°C for 30 seconds (c) 72°C for 30 seconds
    - iii. What are the comparison between PCR and Recombinant DNA technology?
- 2. a. What is Recombinant DNA Technology
  - b. Describe the following and explain their roles using notable example in Recombinant DNA Technology
  - i. Vector
  - ii. Restriction enzymes
  - c. Briefly describe how bacteria cell can be selected after transformation in Recombinant DNA Technology

## SECTION B

- 1. a. Describe recent application of Biotechnology in the following fields
  - i. Agriculture
  - ii. Medicine
  - iii. Chemical and food industry
  - iv. Environment
  - v. Forensic industry
  - b. What are transgenic organisms? Explain the advantages and ethical challenges of depending on genetically modified organisms
- 2. a. List the and explain areas of improvement in microbial strain for fermentation
  - b. How does fermentation increases nutritional quality of cassava
  - c. i. List the uses of alcohol
    - ii. List the bye-products gotten from alcohol fermentation
- 3. a. List and explain the processes involved in alcohol fermentation
  - b. Explain transduction and electroporation as a mode of transfer of desired gene
    - c. i. Mention 5 reasons why we ferment food
    - ii. What are bacteriocins