



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

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION

2016/2017 ACADEMIC SESSION

COURSE CODE: BTH 305

COURSE TITLE: PLANT BIOTECHNOLOGY

DURATION: 2½ hours

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HOD's SIGNATURE

NAME:.....MAT. No:.....

SECTION B

(Answer three questions from this section)

- 1 a) List five (5) traits that can be used for crop improvement.
b) Protoplast fusion technology is a method used to overcome some limitations associated with hybridization method of crop improvement, especially the problem of sexual incompatibility. Briefly discuss the four steps involved in this procedure.

- 2 a) State the two methods used in transgenic plant production.
b) Briefly discuss three (3) advantages and three (3) disadvantages associated with the production of transgenic plants.

- 3 a) What are secondary metabolites and state three (3) usefulness of secondary metabolites each to plants and humans.
b) Briefly discuss how you will use *in vitro* culture technique in the production of secondary metabolites.

- 4 a) What do you understand by the term, "Plants as green factory"?
b) Highlight three (3) advantages and three (3) disadvantages of plant derived vaccines.

- 5 a) Meeting the challenges of today and tomorrow is something Biotechnology holds great promise in. Write a brief note to explain some impacts of Biotechnology in the society.
b) In your opinion, why does the government need to regulate genetically modified (GM) products.

SECTION A

(Answer all the questions from this section and write the answers in your answer booklet)

- 1) When a phosphate group is removed from a nucleotide, the resulting compound is known as _____.
- 2) Three differences between DNA and RNA are: _____, _____ and _____.
- 3) A protoplast is _____.
- 4) Two of the enzymes used for protoplast isolation include _____ and _____.
- 5) Transgenesis refers to _____.
- 6) Super weed is a term used to describe _____.
- 7) Three examples of secondary metabolites include _____, _____ and _____.
- 8) Secondary metabolites can be classified into _____, _____ and _____.
- 9) Two methods of producing vaccines include _____ and _____.
- 10) A common bacterium commonly used for gene transfer in genetic engineering procedure is called _____.