



ELIZADE UNIVERSITY,  
ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION

2020/2021 ACADEMIC SESSION

COURSE CODE: BTH 405

COURSE TITLE: MEDICAL BIOTECHNOLOGY

DURATION: 2 HOURS

HOD's SIGNATURE

ME:.....

MAT. No:.....

INSTRUCTIONS: Answer any four (4) questions

## QUESTIONS

1 a) The role of p53 gene as the genome guardian has been well emphasized, described how this gene successfully regulated the human genome to prevent the occurrence of cancer.

b) Briefly describe the features of cell malignancy.

(15 marks)

2 a) Describe protein therapeutics with relation to types and examples.

b) Mention five (5) examples of proteins used for therapeutics purpose and the clinical problem they solved.

c) Explain the need for protein therapeutics.

(15 marks)

3 a) What is gene therapy?

b) Describe the purposes of gene therapy.

i. What type of cells are used in gene therapy?

ii. Explain how the gene of interest is introduced into the cells.

(15marks)

4 a) Describe the basic principle of In-vitro fertilization.

b) What are the risks associated with In-vitro fertilization?

c) What are the challenges and ethical concern associated with In-vitro fertilization.

(15marks)

5 a) i. Differentiate between mutagens and carcinogens.

ii. Explain the two (2) types of mutation.

b) Citing relevant examples, what is gain of function and loss of function mutation?

c) With notable examples, mention and describe the different DNA repair mechanism.

(15marks)

6 a) Briefly describe the process of tissue engineering and justify its need in modern medicine.

b) Mention and explain any two (2) types of tissue substitution methods used in medicine.

c) Describe the need for and benefit of tissue engineering in medicine.

(15marks)