



ELIZADE UNIVERSITY,
ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION

2018/2019 ACADEMIC SESSION

COURSE CODE: BTH 405

COURSE TITLE: MEDICAL BIOTECHNOLOGY

DURATION: 2 HOURS

HOD's SIGNATURE

NAME:.....

MAT. No:.....

INSTRUCTIONS

Answer any 3 questions

Each question carries equal marks

1a) Using an annotated chart only, describe the molecular process of carcinogenesis.

b) What is carcinogenesis?

c) List and briefly write on the four classes of normal regulatory genes involve in carcinogenesis.

2a) What is protein therapeutics?

b) Using one notable example per type, describe the different types of protein therapeutics.

c) What are the advantages of protein therapeutics over the small molecule drugs?

3a (i) What are Allograft and Autograft?

(ii) What are the disadvantages of bone grafting in comparison with tissue engineering.

b) Briefly explain the process of tissue engineering.

c) Briefly justify the need for tissue engineering in modern medicine.

4a) Briefly discuss the following using one specific example in each mutation

(i) Induced mutation (ii) Spontaneous mutation

b) Differentiate between gain of function mutation and loss of function mutation using specific example.

c) Describe the following DNA repair mechanisms.

(i) Mismatch Repair (ii) Excision Repair

5a) Expatriate on the processes involved in *in vitro* fertilization.

b) What are the challenges of *in vitro* fertilization.