



ELIZADE UNIVERSITY,  
ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION


2019/2020 ACADEMIC SESSION

COURSE CODE: BTH 405

COURSE TITLE: MEDICAL BIOTECHNOLOGY

COURSE UNIT(S): 2 UNITS

DURATION: 2 HOURS

 17/02/2020

HOD's SIGNATURE

NAME:.....

MAT. No:.....

INSTRUCTIONS: Answer any three (3) questions

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- 1a) Describe the molecular basis of carcinogenesis by relating the role of exposure to mutagens from the environment.
- b) Give a brief description of tumor suppressor genes and the types involved in the development of cancer. (20marks)
- 2a) Describe the basic principle of *in-vitro* fertilization.
- b) What are the challenges and ethical concern associated with *in-vitro* fertilization? (20marks)
- 3a) i. Differentiate between mutagens and carcinogens.  
ii. Briefly describe the two (2) types of mutations.
- b) Using relevant examples, explain the concept of gain of function and loss of function mutation.
- c) Describe the different DNA repair mechanism with examples. (20marks)
- 4a) Briefly discuss the process of tissue engineering and justify its need in modern medicine.
- b) Mention and explain any two types of tissue substitution methods used in medicine.
- c) Describe the need for and benefit of tissue engineering in medicine. (20marks)
- 5 a) Write a brief essay on protein therapy.
- b) What are recombinant proteins and their benefits over non-recombinant proteins?
- c) What are the perceived disadvantages of protein therapeutics? (20marks)