

**FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI**  
**SCHOOL OF HEALTH TECHNOLOGY**  
**DEPARTMENT OF BIOMEDICAL TECHNOLOGY**

2013/2014 RAIN SEMESTER EXAMINATION

**BMT 372: INTRODUCTION TO HUMAN BIOTECHNOLOGY**

*Hu*

Instruction: Answer any four (4) questions Time : 2Hrs

- 1a. State five relevance or importance of Biotechnology to Human health
- b. Discuss in details how recombinant DNA technique is employed to produce Human Insulin
- 2a. Explain what is meant by Gene therapy
- b. Discuss in vivo and Ex vivo implementation of gene therapy
- 3a. Write short notes of the Human Genome project (HGP)
- b. Mention two findings of the HGP
- c. Assuming the sequence of the base pairs found in the HGP was to be stored in computer data unit at 6 bits per base pair, show step by step how many megabytes of raw data that this would amount to.
- 4a. Write short notes on the following
  - (i). Genetic code
  - (ii) Plasmid
  - (iii) Transgenic farm animals
- b. Discuss how Dolly the sheep was cloned
- 5a. Distinguished between therapeutic cloning and reproductive cloning
- b. Discuss the technique of Somatic Cell Nuclear Transfer (SCNT)
- c. Mention two (2) limitations of SCNT
- 6a. Discuss two ethical issues raised concerning human cloning
- b. Mention two claims of success in human cloning
- c. Discuss two ways biotechnology is beneficial to the biomedical environment