

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

2011/2012 RAIN SEMESTER EXAMINATION

BMT 372: Introduction to Human Biotechnology

Instruction: Answer four (4) questions only.

Time : 2 hrs

- 1a. Write short note on Recombinant DNA technique.
- b. Briefly discuss three processes that utilize Recombinant DNA technique in pharmaceutical manufacturing.
- 2a. Discuss two basic applications of Biotechnology in the diagnosis of diseases.
- b. Mention two ways of implementing gene therapy treatment, and briefly discuss any one in (a) above
3. Explain the following:
 - (i) Plasmid
 - (ii) Codon
 - (iii) Transgenic farm animals
- b. Discuss two ways Biotechnology has brought improvement in human health.
4. Mention four (4) products of Biotechnology that is beneficial to the biomedical environment.
- b. Briefly discuss any two of the products mentioned in "a" above.
- 5a. Discuss the Human genome project (HGP) under the following headings:
 - (i) What kind of project is it?
 - (ii) What is its primary goal?
 - (iii) When did it begin?
 - (iv) What are their findings?
- b. Assuming the sequence of the base pairs found in the HGP was to be stored in computer data unit at 4 bits per base pair, show step by step how many megabytes of raw data that this would amount to.
- 6a. Write short notes on the following:
 - (i) Molecular cloning
 - (ii) Dolly the sheep
 - (iii) Somatic cell nuclear transfer (SCNT)
- b. Discuss two ethical issues raised concerning human cloning.