

4



CRAWFORD UNIVERSITY
Faith City, Igbesa, Ogun State.
2017/2018 RAIN SEMESTER EXAMINATIONS
COLLEGE: NATURAL AND APPLIED SCIENCES
PROGRAMME: MICROBIOLOGY
COURSE CODE AND TITLE: MCB 428 – MICROBIAL GENETICS
UNIT: 3
TIMES: 3 HOURS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER FOUR

1. Discuss the different ways by which genetic information can be transferred. (15 marks)
2. Write short notes on the following a. Competence in Transformation b. Lytic pathway c. Lysogenic pathway. (15 marks)
- 3 (a). With the aid of a well-labelled diagram, explain in details the complementary structures of the DNA.
(b). List and draw the structures of purines and pyrimidine bases. (10 marks)
- 4 (a). Transcribe and translate the following genetic code following the central dogma.
3' TACAAAGATGACCCCTTTTCCATCATT 5'
(b). Explain what you understand by semi-conservative nature of the DNA replication. (10 marks)
5. (a). What is mutation? Explain the difference between induced and spontaneous mutation.
(b). Describe various possibilities that could occur in a point mutation. (10 marks)
6. Describe transposable elements and discuss the two major types. (10 marks)
7. (a). What are mutagens?
(b). Give three named examples.
(c). Describe the mechanisms of action of named examples in (b) above. (10 marks)