

Wplex.

Department of Microbiology,  
Olabisi Onabanjo University, Ago Iwoye.  
Harmattan Semester examinations 2005/2006 Session.  
MCB 301 Microbial Genetics and Molecular Biology.

Time: 2 ½ Hrs.

Instructions: Answer each Section on a separate booklet.

### Section A

Answer question 1.

- 20
- /1. [a] Explain the term "Pseudo-dominance" using relevant examples.  
[b] Determine the  $F_1$  and  $F_2$  generations of a cross between a homozygous wild-type female fruit fly and a hemizygous white type male fly.

### Section B.

Answer one questions.

2. How would you demonstrate that DNA may be transmitted through:

- a) Specialised sex pilus.  
b) Bacteriophage.

- / 3. Write short notes on the following:

- a) High frequency recombination.  
b) Recipient host.  
c) Competence factor.  
d) Transduction.

is a process that is getting to conjugation it is a process where the  $F^+$  and  $F'$  plasmids transfer from the donor cell to a recipient cell through a sex pilus and produce conjugation tube.

### Section C.

Answer one question.

- / 5. Define the following terms:

- a) Mutants  
b) Restriction enzymes.  
c) Fingerprinting.  
d) N.T.G.

(b) It is the bacterial cell that receives the donor plasmid from donor cell.  
(c) is the factor that is able to recombine cell that it is derived by  $F^-$ .

6. Describe briefly the importance of microbial genetics in any two of the following:

- a) Forensic studies.  
b) Brewing.  
c) Industrial researches.  
d) Food processing.

Vwo/2006

(a) mutants: is a organism that is not found in its population. They are organisms that can give some variations at nutrient. They are also called prototrophic organisms.

(b) restriction enzymes: is a process that occur in digestion of DNA where the DNA is first linearized and the enzymes is use to cut the DNA or plasmid at a specific recognition site or at random. in process of DNA recombination.

Epilke