

Instructions to candidates

Duration: 03 hours

Number of questions: Five (05) questions

Answer all questions

Mark allocation: 100

Index No.

1. a. What is a codone? (02 marks)
- b. What are the major steps of mRNA processing? (03 marks)
- c. Describe how mature mRNA converts into amino acid sequence? (10 marks)

2. a. Diagrammatically Illustrate how RNA duplex is formed? (10 marks)
- b. Explain the major steps in replication process. (10 marks)

3. a. State the difference between chromosomal mutation and point mutation. (05 marks)
- b. Briefly explain the major types in chromosomal mutations. (10 marks)

4. a. What are polyploids? (05 marks)
- b. Briefly describe how natural polyploids are created? (05 marks)
- c. Explain how polyploidy is induced artificially? (10 marks)
- d. Explain why polyploids are important in plant breeding? (05 marks)

5. Write short notes on any Two (02) of the following. (25 marks)
 - a. Hybrid vigor (or heterosis).
 - b. Inbreeding depression.

