



National Open University Of Nigeria

Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja

Faculty of Science

JANUARY/FEBRUARY 2018 EXAMINATIONS

COURSE CODE: BIO 402 CREDIT UNITS: 2

COURSE TITLE: PHYTOGENETICS OF PLANTS

TIME ALLOWED: 2 Hours

INSTRUCTION: Answer question ONE (1) and any other THREE (3) questions

- 1a. Define cytogenetics (6marks)
 - b. What do you understand by monospermy? (2marks)
 - c. Explain chromosomes morphology (5marks)
 - d. Name the three shapes found in chromosomes (6marks)
 - e. What is diploidy? (3marks)
 - f. What are telomeres and their cytogenetic importance?(3marks)
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- 2a. Discuss the roles of Edward Strasberger in the development of Cytogenetics? (9marks)
 - b. Distinguish between heterochromatin and euchromatin (4marks)
 - c. What is the main idea of the chromosome theory of inheritance? (2marks)
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- 3a. Discuss the origin of variations in chromosome number (10marks)
 - b. Why are diploids usually fertile without experiencing the problems of fertility associated with other state of euploidy? (5marks)
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- 4a. What is polyploidy? (5marks)
 - b. Discuss the advantages of polyploidy (10marks)
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5. Write notes on the following:
 - a. Trisomics ($2n+1$) (5marks)
 - b. Chromosome Deletion (10marks)