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**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**National Open University Of Nigeria**

**Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja**

**Faculty of Sciences**

**DEPARTMENT OF PURE AND APPLIED SCIENCES**

**NOVEMBER 2018\_2 EXAMINATION**

**COURSE TITLE: PLANT BREEDING**

**CREDIT UNIT: 2**

**COURSE CODE: BIO 309**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTIONS: ANSWER 4 QUESTIONS ONLY .QUESTION 1 IS COMPULSORY**

**1**a. List 4 consequences of inbreeding in animals **(6marks)**

1b. List 11 factors that stimulate the rise of new epidemics include **(11 marks)**

1c. Write a short note on ‘coefficient of inbreeding’ (F) **(8 marks)**

**2**a. What is Heterosis? **(3marks)**

2b. Explain the term ‘Late-acting self-incompatibility’ **(12 marks)**

**3**a. Enumerate three ways in which plant diseases can be partially controlled. **(3marks)**

3b. Expound on the steps involved plant breeding for disease resistance **(12marks)**

**4**. Highlight the occurrences during early stage of the S-glycoprotein mechanism of

gametophytic self-incompatibility (GSI) **(15 marks)**

**5**a. How many chromosomes are present in a normal somatic human cell?**(1 mark)**

5b. Explain the occurrence of Polyteny in organisms **(14marks)**