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**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER
MAIN EXAMINATIONS**

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY

COURSE CODE: SBT 322

COURSE TITLE: PLANT EVOLUTION

DATE: 18TH APRIL

TIME: 2.00 – 4.00 PM

INSTRUCTIONS TO CANDIDATES

Answer Question One (1) and any other two (2) Questions.

Question One is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

QUESTION ONE

- a) Differentiate between microfossils and macrofossils (4 marks)
- b) Give the three main types of fossils (3 marks)
- c) Which threats did the terrestrial life subject plants to? (3 marks)
- d) Briefly describe the process of parthenocarpy. (5 marks)
- e) What is the difference between aneuploidy and polyploidy? (4 marks)
- f) List any four types of polyploidy. (4 marks)
- g) Define hybridization as used in plant breeding. (2 marks)
- h) Can hybridization lead to plant evolution? Briefly explain. (5 marks)

QUESTION TWO

Account for the geological time scales and their major events regarding plant evolution. (20 marks)

QUESTION THREE

The harsh selection pressures of early terrestrial environments shaped land plant's evolutionary journey. Explain using relevant examples. (20 marks)

QUESTION FOUR

Discuss the various factors of evolution. (20 marks)

QUESTION FIVE

What is the difference between Parthenocarpy and apomixis? (4 marks)

Discuss the various types of apomixis (16 marks)