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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2020/2021 ACADEMIC YEAR FOUR**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF SCHOOL OF PURE AND APPLIED SCIENCES**

**FOR THE DEGREE OF BACHELOR OF EDUCATION**

**COURSE CODE: ZOO 411**

**COURSE TITLE: EVOLUTIONARY BIOLOGY**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 09/10/2021 TIME: 3.00-5.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of TWO (2) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Outline factors that may have contributed to the extinction of dinosaurs (5 marks)
2. Discuss four conditions favoring genetic equilibrium in a population (8 marks)
3. Differentiate between interspecific and intraspecific variation (4 marks)
4. Explain different methods used in relative dating of fossils (4 marks)
5. Evaluate different post mating reproductive isolating mechanism in speciation (4 marks)
6. Highlight five principles of Charles Darwin theory of evolution (5 marks)

**QUESTION TWO**

1. Discuss evidence of adaptive radiation (10marks)
2. Explain methods through which fossils are preserved (10marks)

**QUESTION THREE**

1. Discuss modern synthetic theory of evolution (10 marks)
2. Discuss the major divisions of the geologic time scale (10marks)

**QUESTION FOUR**

Write a short essay on five theories of origin of life (20 marks)

**QUESTION FIVE**

1. Discuss the theories that explains the mechanism that leads to speciation. (15 marks)
2. Explain principles behind Lamark theory of evolution (5 marks)