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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2018/2019 ACADEMIC YEAR FOUR**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**FOR THE DEGREE OF BACHELOR OF EDUCATION**

**COURSE CODE: ZOO 411E**

**COURSE TITLE: EVOLUTIONARY BIOLOGY**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 03/02/2020 TIME: 2.00-4.00 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. Suggest events that may have contributed to the extinction of dinosaurs **[5 marks]**
2. Discuss four conditions favouring genetic equilibrium in a populations **[8 marks]**
3. Distinguish between micro evoluton and macro evolution **[4 marks]**
4. Explain why insecticide resistance in insect is a good evidence of adaptive radiation **[6 marks]**
5. Distinguish between premating and and postmating reproductive isolating mechanism in speciation **[4 marks]**
6. Explain four principles behind Lamark’s “use and disuse” theory explaining evolution **[4 marks]**

**QUESTION TWO**

1. Discuss methods used in geologic dating of fossils **[10 marks]**
2. Explain methods through which fossils are preserved **[10 marks]**

**QUESTION THREE**

1. Discuss the modern synthetic theory of evolution **[10 marks]**
2. Discuss the major divisions of the geologic time scale **[10 marks]**

**QUESTION FOUR**

Summarize the theories of origin of life **[20 marks]**

**QUESTION FIVE**

1. Discuss the theories that explains the mechanism that leads to speciation **[15 marks]**
2. Highlight five principles of Charles Darwin theory of evolution **[5 marks]**