



# **MAASAI MARA UNIVERSITY**

## **REGULAR UNIVERSITY EXAMINATIONS 2019/2020 ACADEMIC YEAR SECOND YEAR FIRST SEMESTER EXAMINATIONS**

### **FOR BACHELOR OF SCIENCE (BOTANY) AND BACHELOR OF SCIENCE (ZOOLOGY)**

**COURSE CODE: ZOO 2105**

**COURSE TITLE: CELL BIOLOGY**

**DATE: 10<sup>TH</sup> DECEMBER, 2019**

**TIME: 0830-1030HRS**

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#### **INSTRUCTIONS TO CANDIDATES**

Answer ANY TEN questions

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1. Describe the difference between the light and electron microscope. (7mks)
2. Explain the diversity of cells in nature. (7 mks)
3. Describe the differences between secretory and excretory cells. (7 mks)
4. Describe the structure and functions of ,Nucleus, Rough endoplasmic reticulum, golgi complex. (7mks)
5. Compare the functions of DNA and RNA. (7mks)
6. state the structural differences between mitochondria and chloroplast. (7mks)
7. Explain the structure and roles of the following in protein synthesis; mRNA, tRNA and rRNA (7mks)
8. describe the genetic code and explain why it is degenerate (7mks)
9. Describe the PCR procedure. (7mks)
10. Explain the electrophoretic method (7mks)
11. Distinguish the mechanisms of endocytosis from exocytosis (7mks)
12. Give an account of the structure and functions of the biological membrane. (7mks)
13. Outline the characteristics of enzymes. (7mks)
14. Outline the ultra structure of animal, plant, yeast and bacterial cells. (7mks)
15. Describe the major steps in the respiration process. (7mks)