



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER EXAMINATIONS
FOR
THE DEGREE OF BACHELOR OF SCIENCE
AND
BACHELOR OF EDUCATION (SCIENCE)**

CORSE CODE: BOT 310

COURSE TITLE: MORPHOGENESIS AND DEVELOPMENTAL ANATOMY

DATE: 20TH APRIL 2018

TIME: 1100 -1300HRS

INSTRUCTIONS

Answer **All** questions in **Section A** and **ANY TWO** in **Section B**

Illustrate your answers with suitable diagrams and give appropriate examples wherever necessary.

SECTION A: ANSWER ALL QUESTIONS (30 MKS)

- 1) Distinguish between the following terms: **(3 mks)**
 - a. Endospermic and nonendospermic seeds **(1 mark)**
 - b. Microgametophyte and macrogametophyte **(1 mark)**
 - c. Oospore and oosphere **(1 mark)**

- 2) List any **THREE** plant hormones and state their roles in plant growth and development. **(3mks)**

- 3) Describe **THREE** ways a plant responds to environmental stimuli. **(3mks)**

- 4) Describe briefly the life cycle of a flowering plant. **(3mks)**

- 5) Describe plant germination phases. **(3mks)**

- 6) Explain briefly initiation and differentiation of floral organs. **(3mks)**

- 7) State characteristics of seeds dispersed by wind. **(3mks)**

- 8) List the factors that lead to abnormal plant growth. **(3mks)**

- 9) Draw a well labeled diagram of a root apical meristem **(3mks)**

- 10) State the economic importance of seeds. **(3mks)**

SECTION B: ANSWER ANY TWO QUESTIONS (40 MKS)

- 11) Discuss various applications of plant tissue culture to plant breeding. **(20 mks)**

- 12) Trace the development of oosphere in angiosperms. **(20 mks)**

- 13) Describe fruit development. **(20mks)**

- 14) Write an essay in seed dormancy **(20mks)**

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