



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF EDUCATION SCIENCE

COURSE CODE: ESM 221

COURSE TITLE: BIOLOGICAL TECHNIQUES

DATE: 19TH JANUARY 2021

TIME: 8.00 -10.00 AM

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

This paper consists of 3 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

Question one

- a) Differentiate between a dissecting microscope and a fluorescence Microscope (3marks)
- b) Explain the purpose of Clearing in tissue process (4marks)
- c) Describe the function of Condenser Lens (3marks)
- d) List the basic cross sectional shapes of microtome knives (3marks)
- e) Insert the symbols for the following SI Photometry Units (3 marks)
- i. Luminous energy
 - ii. Luminous flux
 - iii. Luminous intensity
- f) Briefly describe how one can store prepared slides. (3marks).
- g) List the types of microtomes that are found in the teaching Laboratories (4 marks)
- h) What is progressive staining (3marks)
- i) Briefly describe Paper Chromatography (4 marks)

Question two

Describe the working principle of a gas Chromatography. (20marks)

Question three

Describe general Instructions for dissection (20marks)

Question four

Discuss microscope parts and their functions. (20marks)

Question five

Describe preparation of temporary and permanent slides (20marks)