

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCE AND TECHNOLOGY

BMET 213: MEDICAL HISTOLOGY

STREAMS: BSC (BMET)

TIME: 2 HOURS

DAY/DATE: TUESDAY 03/12/2019

8.30 AM – 10.30 AM

INSTRUCTIONS:

- Answer question **ONE (Compulsory)** and any other **TWO** questions
- Sketch diagrams may be used whenever they may help illustrate your answer
- Do not write anything on the question paper
- This is a closed book exam. No reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials

QUESTION ONE (30 MARKS)

- (a) Differentiate microanatomical, cytological and histochemical fixatives. [6 marks]
- (b) Define the following terms as applied in medical histology. [6 marks]
- Post chromatization
 - Washing out
 - Decalcification
 - Impregnation
 - Honing
- (c) Discuss four (4) signs of autolysis. [4 marks]
- (d) Various staining techniques are employed in medical histology laboratory during research, monitoring and diagnosis of diseases.
- Explain principle of the Hematoxylin and Eosin staining technique. [3 marks]

(ii) Document the step-wise procedure for Hematoxylin and Eosin staining technique. [7 marks]

(iii) Specify the expected results for various cell structures in Hematoxylin and Eosin staining technique. [4 marks]

QUESTION TWO (20 MARKS)

(a) Discuss different types of epithelial cells found in gynecological histological smear. [8 marks]

(b) Discuss treatment of tissue after fixation with different fixatives prior to processing. [6 marks]

(c) Briefly discuss pink disease artifact. [6 marks]

QUESTION THREE (20 MARKS)

(a) Discuss two theories that govern staining reactions in histology. [8 marks]

(b) Discuss the principle and step-wise demonstrate exfoliated cells by Papanicolaou stain and record the staining results. [9 marks]

(c) Discuss three (3) properties of Heidenhain's Susa. [3 marks]

QUESTION FOUR (20 MARKS)

(a) Explain two post-mortem changes that take place in tissue cells after the death of the body or after the tissue is removed from the body. [6 marks]

(b) Discuss eight (8) criteria of a good fixative in a medical histology laboratory. [8 marks]

(c) Describe the formulation of a Zenker's fluid a micro-anatomical fixative. [6 marks]
