



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
SECOND YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL
RESOURCE MANAGEMENT
BACHELOR OF SCIENCE IN ANIMAL HEALTH
AND PRODUCTION**

**COURSE CODE: AHP 1203
COURSE TITLE: HISTOLOGY AND CELL
BIOLOGY**

DATE: 11TH DECEMBER, 2018

TIME: 1430 - 1630 HRS

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions

This paper consists of 2 printed pages. Please turn over.

HISTOLOGY AND CELL BIOLOGY (120 MARKS)

1. Organs of the digestive tract typically have 4 concentric coats. Proceeding outward from the lumen describe them with an aid of a diagram **(20Marks)**

2. (a) Give the distinctive structural component of the wall of the trachea **(4 Marks)**
 (b) Outline the features that distinguish bronchi from bronchioles **(4Marks)**
 (c) State the importance of elastin in the respiratory system **(6Marks)**
 (d) Name the cells of the alveoli giving their function **(6Marks)**

3. (a) State the purpose of staining during tissue slide preparation **(2mark)**
 (b) State how the above purpose in 3a is accomplished **(4marks)**
 (c) Name two general categories of stains **(4marks)**
 (d) Explain the tissue fixation process **(4marks)**
 (e) State three functions of tissue fixation **(6 marks)**

4. Define the following terms
 - a) Cell **[2 Marks]**
 - b) Unicellular **[2 Marks]**
 - c) Multicellular **[2 Marks]**
 - d) Hypertonic solution **[4 Marks]**
 - e) Hypotonic solution **[4 Marks]**
 - f) Isotonic solution **[4 Marks]**

5. Name 10 cell organelles and explain their function **[20 Marks]**
6. a. Define Mitosis **[3Marks]**
 b. List the stages of mitosis in the order of occurrence **[10 Marks]**
 c. Define meiosis **[3 Marks]**
 d. State three events that generate genetic diversity in meiosis **[6 Marks]**

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**SUPPLEMENTARY UNIVERSITY
EXAMINATIONS**

**2018/2019 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL
RESOURCE MANAGEMENT**

**BACHELOR OF SCIENCE IN ANIMAL HEALTH
AND PRODUCTION**

COURSE CODE: AHP 1203

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HISTOLOGY AND CELL BIOLOGY (120 MARKS)

1. Describe the process of preparation of tissue for histological examination **(20marks)**
2. Using example in each class, exhaustively describe the classification of epithelial tissue **(20marks)**
3. (a) Describe the microscopic structure of testis **(10 Marks)**
(b) Describe the histological structure of the uterine wall **(10 Marks)**
4. Discuss the 4 principle types of junctions between animal cells **[20 Marks]**
5. Stepwise, describe the stages of mitosis **[20 Marks]**
6. In a tabular format, compare and contrast the exterior structures and interior structures/organelles of a bacterium, animal and plant cell **[20 Marks]**