



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(ANIMAL HEALTH AND PRODUCTION)

KAS 105: EMBRYOLOGY

DATE: Thursday, 18th March 2021

TIME: 8.00a.m-10.00a.m

INSTRUCTIONS: Answer ALL questions in SECTION A

1. Define the following terms as applied in embryology
 - (a) Embryology (2marks)
 - (b) Oogenesis (2marks)
 - (c) Gene (1mark)
2. Explain the following processes in relation to embryology
 - (a) Fertilization (2.5 marks)
 - (b) Sperm capacitation (2.5 marks)
3. Outline the FIVE stages of mitosis (5 marks)
4. State any FIVE hormones and their function which are involved during fetal development in mammals (5 marks)
5. Define the following terms as applied in embryology
 - (a) Multiparous (1mark)
 - (b) Implantation (1mark)
 - (c) Viviparity (1mark)
 - (d) Meiosis (1mark)
 - (e) Mitosis (1mark)

6. Explain how sex of an embryo is determined (5marks)
7. Explain any TWO types of placenta based on shape and contact points in animals, giving examples of animals where each occur (5marks)
8. (a) Name THREE primary germ layers important in organ development (3marks)
- (c) Explain what is a notochord and its importance in embryo development (2marks)

SECTION B: Answer any TWO questions

1. Discuss the following terms as applied during embryology;
- (a) Cleavage (5marks)
- (b) Gastrulation (5marks)
- (c) Chromosomes (5marks)
2. (a) Describe the process of egg formation in chicken (10 marks)
- (b) Explain the term 'teratogens' as applied in embryology (5 marks)
3. Describe the process of organogenesis in fetal development using the cow as an example. (15 marks)