



**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE IN ANIMAL PRODUCTION**

**ANHE 210: GROSS ANATOMY AND TECHNOLOGY**

**STREAM: B.SC.(ANPD) Y2S1**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 26/7/2010**

**8.30 A.M. - 10.30 A.M.**

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**INSTRUCTIONS:**

- Clearly and precisely answer all questions.
- Start every question on a new page in your answer booklet.

Q.1 (a) Briefly define the following terms:

- Ontogenic development
- Somatic cells
- Germ layers
- Ectopic implantation
- Chryptochid

(b) Trace the formation of the following:

- Primitive streak
- Trilamina germ disk
- Amniotic sac
- Post puberty follicle

[20 marks]

Q.2 (a) What are the functions of skeleton?

(b) List the bones that articulate with the fused radius and ulna proximally and distally in bovine.

(c) Which are the bones of pelvic skeleton?

- (d) Name three types of joints and give an example and location of each.
- (e) List in order from proximal aspect the joints of the hind limb. [20 marks]

Q.3 (a) Name the structures that make the following:

- (i) Lateral wall of abdomen
- (ii) Layers that make scrotum in bulls

(b) Name two muscles in each of the following groups of skeletal muscles:

- (i) Levatur muscles
- (ii) Masticatory muscles
- (iii) Respiratory muscles

(c) Nasal cavity is divided into two halves, each half is further subdivided into three passages. Name the three passages and the bones that partition the nasal cavity.

(d) List all the openings into pharynx. [20 marks]

Q.4 (a) Draw and label the lungs of bovine.

(b) List the components of ruminants digestive system.

(c) Name the blood vessel that supply arterial blood to the following organs:

- (i) Stomach
- (ii) Small intestines
- (iii) Gonads
- (iv) Large intestines
- (v) Rumen
- (vi) Tail
- (vii) Brain
- (viii) Hind legs
- (ix) Uterus
- (x) Fore legs

(d) Briefly describe blood circulation of the liver. [25 marks]

- Q.5 (a) Give the functions of lymphatic system.
- (b) Name a regional lymph node that drain the following body parts in the bovines.
- (i) Ear, base of horn, and Eyelids.
  - (ii) Mouth, chinks muzzle, and mandibular salivary glands.
  - (iii) Soft palate, pharynx, larynx and efferents of other lymph nodes of the head.
  - (iv) Neck, shoulders, and distal parts of the fore limb.
  - (v) Udder, pubic region, and distal parts of the hind limb.
- (c) List 10 body structures/organs that arise from embryological ectoderm germ layer. [15 marks]
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