

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI
DEPARTMENT OF ANIMAL SCIENCE AND TECHNOLOGY

AST 407 (Reproductive Physiology and Endocrinology of Farm Animals)

DATE: 20/2/21
TIME ALLOWED: 3hrs

INSTRUCTION: Answer only five questions, at least one from each section.

SECTION A

- 1a. What are hormones?
- * 1b. Discuss the hormones of the pituitary glands, stating their chemical nature and functions.
- 2a. What are the functions of hormones produced by thyroid gland?
- 2b. Write briefly on adrenal gland, stating their hormones, characteristics, and functions.

At birth, all components of the reproductive tract are present. In the non-pregnant state, the tract is dormant. It becomes active during pregnancy and lactation.

SECTION B

- * 3a. Briefly, explain the following terminologies in farm animals; Fertility, Gestation, Parturition and Lactation.
- 3b. Write short notes on (i) sexual development and (ii) reproductive efficiency.
- 4a. Name and explain the two main classes of reproductive hormones and give two examples of each.
- * 4b. Enumerate the three main aspects of the physiological effects of hormones.

At conception, parts of the tract grow in size. This is due to histological changes.

SECTION C

- 5. With the aid of a well labeled diagram, discuss the reproductive tract of a laying hen with emphasis on the events that take place in each.
- 6a. Define spermatogenesis.
- * 6b. What are the functions of the following in a bull; (i) Testicle (ii) Epididymis (iii) Vas deference (iv) Accessory glands (v) Penis.
- 7a. Where does fertilization take place in female ruminants such as cow?
- 7b. Write the functions of the following in a female ruminant; (i) Ovaries (ii) Uterus (iii) Isthmus (iv) Infundibulum (v) Utero-tubal junction (UTJ).

(3b) In ruminants, the reproductive tract is well developed with a peak in size at parturition. This is due to the importance of the system at that time.

(1b) Oxytocin stimulates uterine contraction & breast contraction.
 (2) Anti-diuretic hormone: stimulates the reabsorption of water from the kidney.
 Prolactin: production of breast milk.
 Growth hormone: stimulates growth.
 Thyroid hormone: stimulates metabolism.
 Adrenal cortex: produces corticosteroids.
 Adrenal medulla: produces adrenaline & noradrenaline.

Accessory glands are found in a general region where vas deference unite to become the urethra.