

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
DEPARTMENT OF ANIMAL SCIENCE AND TECHNOLOGY
2009/2010 HARMATTAN SEMESTER EXAMINATIONS
AST 405: ANATOMY AND PHYSIOLOGY OF FARM ANIMALS

TIME ALLOWED: 3HRS

INSTRUCTION: ANSWER ALL QUESTIONS IN SECTION A AND ANY FOUR (4)
FROM SECTION B.

SECTION A

1. Blood vessel which transport blood to the lungs for oxygenation is
2. Another name for tricuspid valve is
3. Function of pulmonary valve include.....
4. Vena Cava is a vessel that conveys blood fromto.....
5. The major components of the Lymphatic system are -----, -----and.....
6. The reason mammalian circulatory system is called closed system is
7. Pepsin acts on converting them to.....
8. The pH of the stomach is about
9. Reabsorption of water occurs mainly in
10. Pancreas produces essentially three enzymes -----, ----- and
11. Which organ acts as teeth in turkey?.....
12. Bile is produced by and stored in
13. Products of microbial fermentation in the rumen of a cow include -----,-----and-----
14. Some hormones that play important roles in digestion are -----, -----, ----- and -----
15. Hormone secretion can be stimulated or inhibited by -----,-----,-----and-----
16. Functions of Follicle Stimulating Hormone are -----, -----, and-----
17. Testosterone is a male hormone which activities include ----- and -----
Calcitonin, Thyroxine, Relaxin, Testosterone, Estrogen, Glucocorticoids, Adrenaline.
18. Which of these are protein hormones?
19. Which of these are Steroid hormones?
20. List the common hormones produced by the mammalian gonads?

Two major branches of anatomy are 21).....and 22).....
Both animals and plants are built up with small units called 23).....
Specialized cells group together to form 24)..... while various 25) ----- are associated in functional groups called 26)..... The primary types of tissue in animals are 27).....28).....29).....and 30)..... Types of connective tissues include 31).....32).....33)..... 34).35)..... Part of the epidermis, which has the ability to grow is the 36)..... The drying and hardening of the superficial cells of the skin is known as 37).....and 38)..... The organic matter which makes up bones is called 39)..... 40).....is an articular depression found on the articular surface of the scapula.

SECTION B

Q1ai. Mention the types of bones in mammalian body.

ii. Write short notes on any two.

Q1b. Outline the functions of bones.

Q2a. With the aid of a well labeled diagram, describe the structure of the mammalian tooth.

Q2b. State the dental formulae for

i. Sheep. ii. Pig. iii. Dog. iv. Horse and v. Cattle.

Q3a. Briefly describe the anatomical processes involved in the development of hair.

b. Define the following terms

i. Epiphysis

ii. Periosteum

iii. Median plane

iv. Frontal plane

v. Dorsal.

Q4a. What are the functions of the blood and circulatory system in mammals – 5 marks?

Q4b. Discuss how the legs of a goat obtain oxygen and releases carbon (IV) oxide. – 5 marks.

Q5a. Tabulate the common digestive enzymes showing their sources, substrates and products – 5 marks.

Q5b. Discuss how a cow obtains nutrients from grasses – 5 marks.

Q6a. Give 4 examples each of steroid hormones and protein hormones. – 4 marks.

Q6b. Discuss briefly the hormones from the anterior pituitary gland. – 6 marks.

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2008/2009 HARMATTAN SEMESTER EXAMINATIONS

AST 405: ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS

INSTRUCTION: ANSWER ALL QUESTIONS IN SECTION A AND ANY THREE (3) FROM SECTION B.

TIME ALLOWED: 3HRS

SECTION A:

Fill in the missing nomenclature in the spaces provided

- | System | Name | Chief Structure |
|----------------|----------------|-----------------|
| 1. Skeletal | ----- | Bones |
| 2. ----- | Anthrology | Joints |
| 3. Respiratory | Splarachnology | ----- |
| 4. Endocrine | ----- | Ductless glands |
5. Cartilage is a form of connective tissue (True or False)
 6. The essential cell that makes up the nervous tissue is -----
 7. The superficial layer of the skin is covered by -----
 8. The deep growing layer of Epidermis is ----- while the superficial horn-like layer is (9) -----
 10. The drying and hardening of the superficial cells of the skin is called -----
 11. The dispersion of pigment granules in the melanocytes is influenced by -----
 12. The cylindrical shaft of a long bone is known as -----
 13. The arythenoid cartilages apart from helping to close the glottis, also serves as ---

 14. A process whereby oxygen O₂ from blood is diffused into the tissue for cellular oxidation and carbon dioxide CO₂ is diffused into the blood is called -----
 15. The clumping of red blood cells is described as -----
 16. Plasma is serum minus fibrinogen and most clotting factors (True or False)
 17. "Diuresis" is -----
 18. The hormone responsible for increased re-absorption of water from the distal collecting tubules is -----

19. ----- is the fluid that passes from the blood in the Glomerular to the Bowman's capsule.
20. The reflex activity stimulated by the distension of the bladder from constant inflow of urine is -----
21. The nasal cavity is separated into 2 halves by a median -----
22. Sinuses are ----- located in certain cranial bones.
23. Sphenopalatine sinus is particularly found in which species of animals?
24. Roaring in horses is due to the paralysis of the muscles which abduct the ----- cartilage.
25. The pleura consists of 2 serous sacs, each reflected around each lung to form -----
26. Dyspnoea is -----
27. Platelets (Thrombocytes) are derived from ----- cells.
28. The number of neutrophils in the blood ----- in the presence of an infection.
29. The title for AST 405 is -----
30. Epithelial tissues that occurs on the interior surfaces of the body is termed -----
31. Ciliated epithelium are usually found in the air passages and -----
32. ----- and (33) ----- are the varieties of papillae.
34. Smooth muscles is differentiated from skeletal muscles histologically by the absence of -----
35. The small intestine of rabbits is divided into -----, -----, -----
36. The primary sex organs of cocks and hens are ----- and -----
37. -----, 38 ----- 39 ----- are the types of spermatogenic cells found in the seminiferous tubule of ram.
40. Smooth muscles are made up of ----- while white muscle has -----.

SECTION B

SECTION B

1i. Define the following anatomical terminologies

- a) Anterior b) Posterior c) Median plane d) Frontal plane e) Ventral f) Dorsal g) Epiptysis h) Tuberosity i) Process j) Haemolysis.
- ii. Attempt a classification of the mammalian bones.
- iii. List the functions of bones.

2. Write short notes on the following

- i. Tidal volume
- ii. Expiratory reserve volume
- iii. Total lung capacity
- iv. Functional Residual Capacity
- v. Anaemia

3a. What is blood clotting?

b. Present the coagulation cascade and give the full synonyms of the factors involved in the above process.

4a. With the aid of a labeled diagram, discuss extensively the histology of the skeletal muscle.

b. Differentiate between skeletal muscle and smooth muscles.

5a. Briefly attempt a classification of the uterus of named farm animals based on anatomical differences.

b. Write short notes on the following terms:

- i) Dartos muscle ii) Simple epithelium iii) Oviduct iv) Myoglobin v) Ptyalin or Salivary amylase.