UNAM

UNIVERSITY OF NAMIBIA

FACULTY	HEALTH SCIENCES AND VETERINARY MEDICINE		
DEPARTMENT	PRECLINICAL VETERINARY STUDIES		
SUBJECT	VETERINARY STRUCTURE AND FUNCTION I (Paper1, Anatomy)		
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Instructions

This paper consists of Four (4) pages including this front page.
This paper consists of 2 sections:
Section A: 110 marks
Section B: 40 marks
Answer each section in separate answer booklets

ANSWER ALL QUESTIONS

FIRST OPPORTUNITY EXAMINATION

SECTION A (110 Marks)

Question 1
Describe the differences, with examples, between sesamoid bones and splanchnic bones. (4)

Question 2
Describe the elements that contribute to the structure and stability of the following joints: (15)

a) The coxo-femoral joint (5)
b) The shoulder joint (4)
c) The elbow joint (6)

Question 3
The pelvic canal in the different species varies in shape and conformation. These variations contribute to the ease or difficulty of the birthing process. Discuss the structure of the pelvic canal concerning the risk of difficult birth in the following animals: (12)

a) Mares (6)
b) Cows (6)

Question 4
Describe the patella locking mechanism in horses, regarding the structures involved and the method by which the locking is achieved. (6)

Question 5
Draw and label the structure of a hypsodont tooth. (10)

Question 6
What anatomical features makes the skull of a pug prone to proptosis of the eye. (2)

Question 7
Name the muscle(s) responsible for the following action and its/their innervation:(8)

a. Flaring the nostril, snarling (2)
b. To shrug the shoulders and turn the head to the side. (4)
c. The Panniculus reflex (2)

Question 8
Poll evil and fistulous withers are medical conditions that are difficult to treat in horses. They occur as a result of infection of structures associated with the nuchal ligament. (14)

a. What anatomical structures comprise the poll and the withers? (2)
b. What is the nuchal ligament? (1)
c. What is the function of the nuchal ligament? (1)
d. Which animals do NOT have a nuchal ligament? (2)
e. What are the attachments of the nuchal ligament in the horse?(2)
f. Name the bursae found associated with the nuchal ligament and where are they located. (6)
g. Why are these bursae difficult to treat once infected? (1)

Question 9
Describe the process of monocytopoiesis. (8)

Question 10
State the differences in function between primary and secondary lymphoid organs and give an example of each. (4)

Question 11
List the basic structural components of bone marrow. (5)

Question 12
Define the term extra-medullary haemopoiesis and state when it occurs in an animal. (4)

Question 13
What is the function of pseudo-unipolar neurons and give two examples of these neurons in the body. (3)

Question 14
Describe the difference in regeneration and healing of damaged skeletal and cardiac muscle. (4)

Question 15
Define the following terms: (8)

a) Retinaculum. (2)
b) Syndesmosis. (2)
c) Scarring. (2)
d) Metaplasia. (2)

Question 16
What is the mesothelium and what are its functions (3)

SECTION B (40 Marks)

Question 17
Name five (5) general types of teratogenesis giving appropriate examples. (10)

Question 18
Define homozygotic twining and explain how it might occur. (2)

Question 19

For the following tissues/organs, give the specific germ layers from which they are derived (8)

a) Nervous system
b) Muscles
c. Bones
d) Tendons
e) Inner part of the digestive system (the largest part)
f) Kidneys
g) Oocytes
h) Spermatozoa

Question 20

Fill in the missing words in the following paragraph. (20)

From a developmental point of view, the primitive brain vesicles comprise three components the .....(1) or forebrain, the .....(1) or midbrain and the ..... (1) or hindbrain. The forebrain develops further into the .....(1) or .....(1) and the .....(1). .....(1) ventricles are associated with the former and the .....(1) is associated with the latter. The midbrain does not develop further. The hindbrain further develops into a ventrally and caudally located.....(1) or.....(1) and a cranially located..... (1) with a ventral part called the.....(1) and a dorsal part, ...(1)

The brainstem comprises the .....(1) , ...(1) and the .....(1) and serves as the origin of the cranial nerves

Only the .....nerve (1) arises directly from the telencephalon. The ..... (1) arises from the diencephalon. The .....(1) arises from the ventral part of the mesencephalon. The pons and medulla oblongata serve as the origin of most of the .....(1)

End of Paper