



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: ANIMAL NURSING

PAPER NO: 387/22/M06

DURATION: 3 hours

MAY/JUNE 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer all questions from Section A.
2. Answer any three (3) questions from Section B.
3. Do not write your name on the answer script.
4. Do no write anything on the question paper.

This paper consists of 3 printed pages.



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SECTION A-Answer all questions.

QUESTION 1

- a) Define the following terms.
- i) Cell. (2marks)
 - ii) balanced diet. (2marks)
 - iii) homeostasis. (2marks)
 - iv) resuscitation. (2marks)
- b) List any two (2) common breeds for the following animals.
- i) Dogs. (2marks)
 - ii) Cattle. (2marks)
 - iii) Goats. (2marks)
- c) Assess four (4) vitals which should be recorded. (4marks)
- d) State the normal temperature and colour of membrane in dogs. (2marks)

QUESTION 2

- a) Explain reasons why record keeping for animal feed stocks and leftovers is important. Give five (5) reasons and explain. (10marks)
- b) Describe the structure and function of the digestive system. (10marks)

SECTION B-Answer any three (3) questions.

QUESTION 3

- a) Describe cell metabolism. (8marks)
- b) Categorise any five (5) types of dressing and bandages. (10marks)
- c) List any two (2) indications for resuscitation. (2marks)

QUESTION 4

- a) Summarize any five (5) types of wounds. (10marks)
- b) Establish ten (10) common animal behaviours of animals. (10marks)

QUESTION 5

- a) Identify any five (5) types of bedding, stating advantages and disadvantages of each and how they are cleaned. (20marks)

QUESTION 6

- a) Describe the anatomy and physiology of the circulatory system. (10marks)
- b) Describe any five (5) functions of the nervous system. (10marks)

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

**SUBJECT: Veterinary Anatomy and PAPER NO: 387/22/M01
Physiology**

DURATION: 3hours

MAY/JUNE 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer all questions from section A.
- 2) Answer three (3) questions from section B.
- 3) Do not write your name on the answer script.
- 4) Do not write anything on the question paper.

This paper consists of 3 printed pages.

SECTION A: ANSWER ALL QUESTIONS

QUESTION 1

- a) Define the following terms:
- i) Homeostasis (2 marks)
 - ii) Tachycardia (2 marks)
 - iii) Euthanasia (2 marks)
 - iv) Prognosis (2 marks)
 - v) Glaucoma (2 marks)
- b) Define any five (5) anatomical directions. (5 marks)
- c) Outline five (5) functions of the tongue (5 marks)

QUESTION 2

- a) State any five (5) types of animal cells. (5 marks)
- b) Identify any five (5) endocrine glands. (5 marks)
- c) Discuss the levels of organisation of the animal body. (10 marks)

SECTION B: ANSWER ANY THREE (3) QUESTIONS

QUESTION 3

- a) Outline two (2) groups which proteins fall under. (6 marks)
- b) Outline three (3) functions of the nervous system. (6 marks)
- c) Describe four (4) types of tissues in the body and their functions. (8 marks)

QUESTION 4

- a) The cell process: Mitosis. Fill in the gaps
the ----- of the body grow, particularly when an animal is young and are able to repair themselves when damaged. This is achieved by a process of ----- in which the ----- cells of the body make identical copies of themselves. The cells replicate by dividing into two; a process called-----. They must first make a copy of all the ----- information that the new cell will need in order to function normally. This information is carried in the ----- of the chromosomes within the ----- of the ----- cell. The normal number of chromosomes is described as the ----- and before cell division takes place the chromosomes are ----- (10 marks)

- b) State and explain any five (5) functions of the skin. (10 marks)

QUESTION 5

- a) List the bones of the spinal column, their number and the regions they are found. (15 marks)
- b) List any five (5) functions of connective tissues. (5 marks)

QUESTION 6

- a) Describe the stages of image formation. (10 marks)
- b) Describe the process of inspiration. (5 marks)
- c) Define the following reproductive terms:
- i) Zygote (1 mark)
 - ii) Embryology (1 mark)
 - iii) Neonate (1 mark)
 - iv) Fetus (1 mark)
 - v) Gamete (1 mark)

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IN

VETERINARY TECHNOLOGY

MODULE: Veterinary Assisting

PAPER NO: 387/22/M02

DURATION: 3 hours

MAY/JUNE 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

Answer all questions.

This paper consists of 3 printed pages.



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SECTION A

Answer all questions.

QUESTION 1

- a) Define the following terms:
- i) Balanced diet (3 marks)
 - ii) Medical record keeping (5 marks)
- b) Outline any five (5) duties of a practice manager. (5 marks)
- c) List supplies needed for testing blood, urine and faeces. (7 marks)

QUESTION 2

- a) State any five (5) restraint devices, for manual restraint. (5 marks)
- b) List routes by which common veterinary mediums are administered. (5 marks)
- c) Discuss any five (5) safety protocols in the veterinary laboratory. (10 marks)

SECTION B

Answer any three (3) questions.

QUESTION 3

- a) Describe SOAP format, meaning n organizing medical information. (15 marks)
- b) List five (5) job descriptions within the veterinary health care for a veterinary assistant. (5 marks)

QUESTION 4

- a) Demonstrate effective communication skills under verbal communication. (6 marks)
- b) Describe how to apply psychological restraint; identify any five (5) steps and explain. (10 marks)

PAPER NO: 387/22/M02 -- VETERINARY ASSISTING

- c) Discuss the scope of the veterinary medical profession under small animal practices. (4 marks)

QUESTION 5

- a) Explain the importance of companion animal's role in the society. (6 marks)
- b) Define euthanasia. (2 marks)
- c) Outline the strategies of dealing or working with difficult people. (4 marks)
- d) Discuss components of a comprehensive work place safety plan under illness and Injury Prevention Plan (IIPP). (5 marks)
- e) List any three (3) PPE when disinfecting a veterinary hospital. (3 marks)

QUESTION 6

- a) Discuss the steps taken to set up common laboratory procedures in the veterinary clinic. (5 marks)
- b) Summarize safety precautions required in a veterinary radiology setting. (5 marks)
- c) Describe any one (1) technique used in general nursing care of dogs and cats. (5 marks)
- d) Write the discharge instructions for bandaging. (5 marks)

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Diagnostic AIDS

PAPER NO: 387/22/M03

DURATION: 3 Hours

MAY/JUNE 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer All questions from Section A
2. Answer any three (3) questions from Section B.
3. Do not write your name on the Answer script.
4. Do not write anything on the question paper

This paper consists of 4 printed pages.

Section A

Answer all questions

QUESTION 1

a) Define the following terms:

- | | | |
|------|-----------|-----------|
| i) | Sample | (2 marks) |
| ii) | Biohazard | (2 marks) |
| iii) | Diagnosis | (2 marks) |
| iv) | Grooming | (2 marks) |
| v) | Parasite | (2 marks) |

b) Outline any ten (10) principles of biosafety in the laboratory. (10 marks)

QUESTION 2

- a) State and explain any five (5) parasitic adaptations to the host. (10 marks)
- b) Outline any five (5) standard operating procedures for logging samples. (5 marks)
- c) Write any five (5) endoparasites you know. (5 marks)

Section B

Answer any three (3) questions.

QUESTION 3

- a) Describe the process of blood collection from a cephalic vein in a dog. (8 marks)
- b) List any six (6) grooming materials and equipment and their functions. (12 marks)

QUESTION 4

- a) List any five (5) methods of grooming. (5 marks)
- b) Outline the importance of patient signalment. (3 marks)
- c) Explain four (4) ways in which laboratory diagnostic aids are an invaluable tool to the care and welfare of the animal. (8 marks)
- d) Describe the proper way of handling and transporting specimen. (4 marks)

QUESTION 5

- a) Analyse the life cycle of an Ascaris. (10 marks)
- b) Explain why anaesthesia is important (4 marks)
- c) Outline any three (3) risks caused by biological hazards which affect human health. (3 marks)
- d) Identify three (3) types of grooming tables. (3 marks)

QUESTION 6

- a) Indicate how data confidentiality can be ensured. (5 marks)
- b) List three (3) sites for blood collection in cats. (3 marks)
- c) State and explain five (5) physical properties of urine. (10 marks)
- d) Verify the contents of the following laboratory tubes:
- i) Lavender Top Tube
 - ii) Blue Top Tube
- (2 marks)

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IN

VETERINARY ASSISTANT

MODULE: Veterinary Assisting

PAPER NO: 387/25/M02

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer all questions in Section A.**
- 2. Answer any three (3) questions in Section B.**

SECTION A: Answer all questions.

QUESTION 1

- (a) Define conflict resolution techniques. (2 marks)
- (b) List any five (5) routes by which common veterinary medicines are administered. (5 marks)
- (c) Outline medical procedures for euthanasia. (5 marks)
- (d) List any five (5) duties of a veterinarian in a veterinary hospital. (5 marks)
- (e) Outline any three (3) importance of biomedical in the veterinary medical profession. (3 marks)

QUESTION 2

- (a) List any five (5) importance of having a pet as a family member. (5 marks)
- (b) List and explain five (5) filling system used in veterinary practice. (10 marks)
- (c) List any five (5) types of difficult people. (5 marks)

SECTION B

Answer three (3) questions.

QUESTION 3

- (a) List ten ways in which a pet can be memorised. (10 marks)
- (b) List any ten (10) telephone skills when talking with a client. (10 marks)

QUESTION 4

- (a) State and explain stages of grief. (10 marks)
- (b) Outline any ten (10) available career choices for the veterinary assistant in boarding kennels. (10 marks)

QUESTION 5

For each establishment list below, outline four (4) available job career choices for the veterinary assistant.

- (a) retail (4 marks)
- (b) shelters (4 marks)
- (c) boarding kennels (4 marks)
- (d) biomedical (4 marks)
- (e) private small animal practice (4 marks)

QUESTION 6

- (a) Outline any five strategies when working with difficult people. (5 marks)
- (b) Define record keeping. (2 marks)
- (c) list any five supplies needed for testing blood. (5 marks)
- (d) State any three (3) supplies needed ore faeces sample. (3 marks)
- (e) List any five (5) filling system used in veterinary practice. (5 marks)



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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Diagnostic Aids

PAPER NO: 387/22/M03

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer all questions from section A.
- 2) Answer three (3) questions from section B.

This paper consists of 3 printed pages.

SECTION A

ANSWER ALL QUESTIONS

QUESTION 1

- a) Define the following terms
 - i) Tentative diagnosis (2 marks)
 - ii) Diagnosis (2 marks)
 - iii) Specimen (2 marks)
 - iv) Parasite (2 marks)
 - v) Biohazard (2 marks)
- b) List any five (5) principles of biosafety in laboratory (5 marks)
- c) State five (5) types of samples for laboratory analysis. (5 marks)

QUESTION 2

- a) Identify the contents of the following tubes:
 - i) Lavender top tube (1 mark)
 - ii) Green top tube (1 mark)
 - iii) Grey top tube (1 mark)
 - iv) Red top tube (1 mark)
- b) Discuss four (4) ways in which laboratory diagnostic aids are an invaluable tool to the care and welfare of animals. (8 marks)
- c) List four (4) methods of ensuring data confidentiality. (8 marks)

SECTION B: ANSWER THREE (3) QUESTIONS

QUESTION 3

- a) Describe the life cycle of a liver fluke. (10 marks)
- b) Describe five (5) standard operating procedures for logging samples. (10 marks)

QUESTION 4

- a) Discuss the life cycle of an ascaris. (10 marks)
- b) List five (5) grooming equipments and their functions. (10 marks)

QUESTION 5

- a) Outline five (5) reasons why grooming is necessary. (5 marks)
- b) State five (5) reasons why anaesthesia is important. (5 marks)
- c) Describe the life cycle of a pin worm. (10 marks)

QUESTION 6

Design a laboratory request form.

(20 marks)

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IN

VETERINARY ASSISTANT

MODULE: Veterinary Assisting

PAPER NO: 387/22/M02

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer all questions in Section A.**
- 2. Answer any three (3) questions from Section B.**

PAPER NO:387/22/M02- VETERINARY ASSISTING

SECTION A

QUESTION 1

- a) List any five (5) job descriptions of a veterinary assistant. (5 marks)
- b) State five (5) importance of shelter medicine practice. (5 marks)
- c) Define human animal bond. (2 marks)
- d) Outline four (4) strategies and methods that can be used to ensure security in record management. (8 marks)

QUESTION 2

- a) Explain five (5) filing systems commonly used in veterinary practices. (10 marks)
- b) Discuss any five (5) components of comprehensive work plan safety plan. (10 marks)

SECTION B- Answer any three (3) questions

QUESTION 3

- a) Discuss any five (5) types of restraint devices used in small animals. (10 marks)
- b) Describe any five (5) steps taken to "room" a patient. (10 marks)

QUESTION 4

- a) Discuss five (5) steps involved in setting up common laboratory procedures in a veterinary clinic. (10 marks)
- b) Describe how to prepare an ear swab. (10 marks)

QUESTION 5

- a) State and explain any five (5) safety protocols in the laboratory. (10 marks)
- b) Outline any five (5) routes by which common veterinary medicines are administered. (10 marks)

QUESTION 6

- a) Discuss any five (5) principles of wound care and bandaging. (10 marks)
- b) List any five (5) methods used to disinfect and sterilise surgical instruments and supplies. (5 marks)
- c) List the five (5) stages of grief. (5 marks)

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Animal Nursing

PAPER NO: 387/22/M06

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer all questions in Section A.
2. Answer any three (3) question in Section B.
3. Do not write your name on the answer booklet.
4. Do not write anything on this question paper.

SECTION A- Answer all questions.

QUESTION 1

- a) Define the following terms:
- i) Cell (1 mark)
 - ii) Homeostasis (2 marks)
- b) List any five (5) types of cells. (5 marks)
- c) Discuss five (5) common breeds in the following animals:
- i) Cattle (5 marks)
 - ii) Pigs (5 marks)
- d) Explain a balance diet. (2 marks)

QUESTION 2

- a) Discuss five (5) types of feed. (10 marks)
- b) Describe five (5) types of wounds. (10 marks)

SECTION B- Answer any three (3) questions

QUESTION 3

- a) Highlight five (5) indications of resuscitation. (10 marks)
- b) Describe five (5) techniques used for resuscitation. (10 marks)

QUESTION 4

- a) Describe the physiology of the respiratory system. (8 marks)
- b) Discuss five (5) normal behaviours in dogs and cats during oestrus. (10 marks)
- c) Define house training. (2 marks)

QUESTION 5

- a) Describe five (5) functions of the nervous system. (10 marks)
- b) Discuss cell metabolism (10 marks)

QUESTION 6

- a) Discuss the anatomy and functions of the digestive system. (20 marks)

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Drug Administration

PAPER NO: 387/22/M05

DURATION: 3 Hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Section A: Answer all questions.
2. Section B: Answer any three (3) questions.

PAPER NO: 387/22/M05 – DRUG ADMINISTRATION

QUESTION 1

- (a) Differentiate between immediate release tablets and extended-release tablets. (10 marks)
- (b) Decipher the following abbreviations
- | | |
|------------|----------|
| (i) qds | (1 mark) |
| (ii) tiw | (1 mark) |
| (iii) IU | (1 mark) |
| (iv) qod | (1 mark) |
| (v) D/C | (1 mark) |
| (vi) H/S | (1 mark) |
| (vii) gtts | (1 mark) |
| (viii) prn | (1 mark) |
- (c) State any two (2) routes of administering medication? (2 marks)

QUESTION 2

- (a) Discuss any five (5) factors to consider when deciding whether or not to split a tablet. (10 marks)
- (b) Differentiate between scored tablets and unscored tablets. (10 marks)

SECTION B

Answer any 3 questions

QUESTION 3

- (a) Identify the specific household equivalence and total quantities to be administered for the following:-
- (i) amoxicillin po 5ml tds x $\frac{5}{7}$. (4 marks)
 - (ii) adcolincopect po 15ml qds x $\frac{3}{7}$ (4 marks)
 - (iii) oral rehydration solution two alpfuls $\frac{2}{7}$ (4 marks)

use the table format for answering this question.

- (b) Give a brief explanation on what you understand by the term “household equivalent”. (4 marks)
- (c) State the four (4) basic unit measurement for the metric international system. (4 marks)

QUESTION 4

- (a) Discuss how you would perform a physical examination to assess for dehydration in animals, state at least five (5) well explained physical examination. (10 marks)
- (b) Define the term reconstitution. (2 marks)
- (c) State and explain four (4) reasons why drugs must be supplied in dry form? (8 marks)

QUESTION 5

- (a) For the following items calculate the dilutions of stock solutions.
- (i) From a 50% solution of dextrose make 500ml of a 5% solution. (6 marks)
 - (ii) Using a 70% solution of alcohol make 200ml of a 10% solution. (6 marks)
 - (iii) How much diluent do you need to add to make 100ml of a 4% solution using a 20% stock solution. (6 marks)
- (b) Define the following terms?
- (i) solution (1 mark)
 - (ii) dilution (1 mark)

PAPER NO: 387/22/M05 – DRUG ADMINISTRATION

QUESTION 6

- (a) Outline six (6) reasons for fluid therapy in veterinary medicines. (6 marks)
- (b) Briefly explain any two (2) most common complications of intravenous fluid therapy. (4 marks)
- (c) How best can the complications mentioned above be prevented. (6 marks)
- (d) State any four (4) types of intravenous fluids that can be administered in dehydrated animals. (4 marks)

QUESTION 7

- (a) Define the following terms:-
- (i) Label (2 marks)
- (ii) Prescription (3 marks)
- (b) List five (5) important information you would expect to find on a prescription. (5 marks)
- (c) A dog weighs 85,6lb, it is to receive a dose of 15mg/kg, qbhr pox ^{12/7}. You have 200mg tablets on hand. What is the total number of tablets to be dispensed. (10 marks)

NB: Perform all the required calculations in order to get full marks

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Pharmacology for VET Nurses

PAPER NO: 387/22/M04

DURATION: 3 hours

JUNE 2026 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer all questions in Section A.
2. Answer any three (3) questions in Section B.
3. Each question carries 20 marks.

This paper consists of 4 printed pages.

SECTION A

Answer all questions.

QUESTION 1

- a) Define the following terms:
- | | | |
|------|------------------|-----------|
| i) | Pharmacology | (2 marks) |
| ii) | Pharmacokinetics | (2 marks) |
| iii) | Pharmacodynamics | (2 marks) |
| iv) | Drug | (2 marks) |
| v) | Bioavailability | (2 marks) |
- b) State any five (5) routes of drug administration used in veterinary pharmacy. (5 marks)
- c) Briefly describe how you would administer a parenteral drug to an animal. (5 marks)

QUESTION 2

- a) State any five (5) methods of drug disposal. (5 marks)
- b) List five (5) controlled substances that are used in vet pharmacy. (5 marks)
- c) Define the following terms as used in pharmacodynamics.
- | | | |
|------|-------------------|-----------|
| i) | Receptor | (2 marks) |
| ii) | Potency | (2 marks) |
| iii) | Affinity | (2 marks) |
| iv) | Synergy | (2 marks) |
| v) | Therapeutic index | (2 marks) |

SECTION B

Answer any three (3) questions.

QUESTION 3

Identify and classify drugs affecting the gastro-intestinal tract under the following headings:

- a) Emetics and antiemetics (5 marks)
- b) Antidiarrheals (5 marks)
- c) Laxatives and cathartics (5 marks)
- d) Anti-ulcer medication (5 marks)

QUESTION 4

- a) Describe how inotropic drugs work giving three (3) examples of positive inotropes and three (3) examples of negative inotropes. (10 marks)
- b) Define the following terms as used in cardio-vascular pharmacology:
 - i) Heart failure (2 marks)
 - ii) Tachycardia (2 marks)
 - iii) Arrhythmia (2 marks)
 - iv) Anticoagulant (2 marks)
 - v) Hypertension (2 marks)

QUESTION 5

- a) Briefly describe the mechanism of action of NSAIDs and give two (2) examples of NSAIDs. (6 marks)
- b) State five (5) common signs of pain in an animal. (5 marks)
- c) State the four (4) common signs of diabetes mellitus in animals. (4 marks)
- d) State the uses of anabolic steroids and explain why they are classified as Class III or Category III of controlled substances. (5 marks)

QUESTION 6

- a) Define the term diuretic. Give two (2) examples of conditions that can be managed by using diuretics. (4 marks)
- b) Define the following terms as used in anti-infective drugs.
- i) Bactericidal (2 marks)
 - ii) Bacteriostatic (2 marks)
 - iii) Panasitasis (2 marks)
 - iv) Parasitosis (2 marks)
 - v) Anthelminthic (2 marks)
- c) Briefly describe the mechanism of action of avermectins and give two (2) examples of drugs classified as avermectins. (6 marks)

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**HIGHER EDUCATION EXAMINATIONS COUNCIL
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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Animal Nursing

PAPER NO: 387/22/M06

DURATION: 3 hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Section A: Answer all questions.**
- 2. Section B: Answer three (3) questions.**

SECTION A

Answer all questions.

QUESTION 1

- a) Compare and contrast prokaryotic cells vs eukaryotic cells. (4 marks)
- b) Define animal nutrition. (2 marks)
- c) Explain any five (5) types of wounds? (10 marks)
- d) List any four (4) common breed of dogs. (4 marks)

QUESTION 2

- a) Describe house training. (5 marks)
- b) Write short notes on cell metabolism. (10 marks)
- c) List five (5) types of feed. (5 marks)

SECTION B

Answer three (3) questions.

QUESTION 3

- a) Describe the process of digestion. (10 marks)
- b) Discuss any five (5) deficiency diseases concerning animal nutrition. (10 marks)

QUESTION 4

- a) Discuss the functions of the nervous system. (10 marks)
- b) Outline any five (5) types of dressing and bandaging. (10 marks)

QUESTION 5

- a) Define resuscitation. (2 marks)
- b) List the indications for resuscitation. (4 marks)
- c) State any four (4) commonly used equipment for resuscitation. (4 marks)
- d) Describe common animal behaviours. (10 marks)

QUESTION 6

Identify normal vs abnormal behaviour during:

(8 marks)

- a) Oestrous cycle (6 marks)
- b) Pregnancy (6 marks)
- c) Parturition

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INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATION

IN

VETERINARY NURSING

**MODULE: Pharmacology for Veterinary
Nurses**

PAPER NO: 387/22/M04

DURATION: 3 Hours

NOVEMBER/ DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer all questions for Section A.**
- 2. Answer any three (3) questions from Section B.**

SECTION A

Answer all questions

QUESTION 1

- a) Define the following terms:
- i) Pharmacology (2 marks)
 - ii) Pharmacokinetics (2 marks)
 - iii) Pharmacodynamics (2 marks)
 - iv) Therapeutic index (2 marks)
 - v) Bioavailability (2 marks)
- b) State the four (4) drug targets found in animals body. (4 marks)
- c) State any six (6) routes of drug administration in animals. (6 marks)

QUESTION 2

- a) State any five (5) antibiotics used in animals. (5 marks)
- b) List any four endocrine glands found in animals. (4 marks)
- c) Discuss any four (4) drug disposal methods. (8 marks)
- d) Outline any three (3) uses of barbiturates in animals. (3 marks)

SECTION B

Answer any time (3) questions.

QUESTION 3

- a) List any five (5) controlled substances. (5 marks)
- b) Classify drugs used as antiarrhythmic drugs in animals giving an example of a drug for each class. (8 marks)
- c) Name any seven (7) common side effects associated with the use of NSAIDs in animals. (7 marks)

QUESTION 4

- a) Define the following terms used in pharmacodynamics:
- i) Agonist (2 marks)
 - ii) Receptor (2 marks)
 - iii) Saturability (2 marks)
 - iv) Potency (2 marks)
 - v) Efficacy (2 marks)
- b) List any five (5) pharmacokinetics parameters. (5 marks)
- c) Identify any five (5) NSAIDs of your choice that are used in analgesia in animals. (5 marks)

QUESTION 5

- a) Briefly describe the mechanism of action of NSAIDs. (5 marks)
- b) State any five (5) signs of pain in animals. (5 marks)
- c) Outlines two (2) advantages and three (3) disadvantages of cryopreservation and refrigeration as methods of preservation. (8 marks)

QUESTION 6

Identify four (4) classes of drugs which affect the gastrointestinal tract and give four (4) of examples drugs under each classification. (20 marks)

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NATIONAL CERTIFICATE

**IN
VETERINARY TECHNOLOGY**

MODULE: Veterinary Assisting

PAPER NO: 387/22/M02

DURATION: 3 Hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer all questions in Section A.**
- 2. Answer any three (3) question in Section B.**
- 3. Do not write your name on the answer booklet.**
- 4. Do not write anything on this question paper.**

SECTION A-Answer all questions

QUESTION 1

- a) Outline five (5) duties of a veterinary assistant. (5 marks)
- b) Explain the importance of a pet as a family member. (6 marks)
- c) List five (5) importance of shelter medicine. (5 marks)
- d) List four (4) ways in which a pet can be memorialized. (4 marks)

QUESTION 2

- a) Discuss stages which involved in the process of euthanasia. (10 marks)
- b) Explain the stages of grief. (10 marks)

SECTION B- Answer any three (3) questions.

QUESTION 3

- a) Discuss any five (5) conflict resolution techniques. (10 marks)
- b) Describe four (4) types of difficult people. (8 marks)
- c) Define human animal bond. (2 marks)

QUESTION 4

- a) List any five (5) strategies and methods that can be used to ensure security in record management. (5 marks)
- b) Discuss three (3) components of a comprehensive workplace safety plan. (6 marks)
- c) Explain desanitation. (2 marks)
- d) Outline five (5) basic pharmacy skills. (5 marks)
- e) Define nutrition. (2 marks)

QUESTION 5

- a) Describe four (4) restraining techniques for cats. (8marks)
- b) List five (5) restraining devices for dogs. (5 marks)
- c) Describe how to prepare an ear swab. (7 marks)

QUESTION 6

- a) Explain the following types of sterilizations.
 - i) Autoclave (2 marks)
 - ii) Gas sterilization (2 marks)
- b) List five (5) beneficial effects of bandaging. (5 marks)
- c) Recognise any five (5) signs of pain in dogs and rats. (5 marks)
- d) List any three (3) routes by which drugs can be administered. (3 marks)
- e) Identify any three (3) PPE necessary to take radiographs. (3 marks)

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IN

VETERINARY TECHNOLOGY

MODULE: Diagnostic Aids

PAPER NO: 387/22/M03

DURATION: 3 Hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer all questions in Section A.
2. Answer three (3) questions in Section B.

Section a

Answer all questions

QUESTION 1

(a) Define the following terms:-

(i) Sample (2 marks)

(ii) Biologic hazard (2 marks)

(iii) Parasite (2 marks)

(iv) anaesthesia (2 marks)

(v) grooming (2 marks)

(b) Identify any five (5) grooming equipment and their uses. (10 marks)

QUESTION 2

(a) Outline five (5) principles of biosafety in the laboratory. (10 marks)

(b) Explain how parasites adapt so as to live on the host. (10 marks)

SECTION B

Answer three (3) questions

QUESTION 3

(a) Design a laboratory request form. (15 marks)

(b) Explain how is data confidentiality ensured. (5 marks)

QUESTION 4

(a) Outline the importance of patient signalment (5 marks)

(b) List five (5) reasons why grooming is necessary (5 marks)

(c) Discuss the life cycle of blood and liver flukes (Trematodes) (10 marks)

QUESTION 5

- (a) Describe the life cycle of an Ascaris. (10 marks)
- (b) Explain five (5) ways to care for an anaesthetised animal. (10 marks)

QUESTION 6

- (a) Describe the standard operating procedure for logging in samples. (10 marks)
- (b) Explain how laboratory diagnostic aids are an invaluable tool to the care and welfare of the animal. (8 marks)
- (c) Define diagnosis. (2 marks)

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IN

VETERINARY ASSISTANT

MODULE: Drug Administration PAPER NO: 387/22/M05

DURATION: 3 Hours

NOVEMBER/DECEMBER 2025 EXAMINATION

REQUIREMENTS

Calculator

INSTRUCTIONS TO CANDIDATE

1. Answer ALL questions in Section A.
2. Answer ANY THREE (3) questions in Section B.
3. Do not write anything on the question paper.
4. Do not write your name on the answer booklet.

SECTION A

Answer ALL questions.

QUESTION 1

(a) Decipher the following abbreviations:-

- | | | |
|-------|------------|----------|
| (i) | D/C | (1 mark) |
| (ii) | TIW | (1 mark) |
| (iii) | STAT | (1 mark) |
| (iv) | Guttae | (1 mark) |
| (v) | Cras manne | (1 mark) |

(b) Interpret the following statements

- | | | |
|-------|---|----------|
| (i) | Give 10ml sq q24h $\times \frac{7}{9}$
Dispense 50ml | (1 mark) |
| (ii) | Sig: Instil i guttae OU q12h $\times \frac{14}{7}$
Dispense 10ml | (1 mark) |
| (iii) | ii gtts q4h OD | (1 mark) |
| (iv) | Inj Heparin od im | (1 mark) |
| (v) | 86.5 lb dog, dose is 15mg/kg; q6h po $\times \frac{12}{7}$. You have 200mg tablets on hand. What is the total number of tablets to be dispensed? | |

NB: interpret the statement then calculate in order to obtain full marks (6 marks)

QUESTION 2

- | | | |
|-----|--|-----------|
| (a) | Briefly explain what the Avoirdupois system is about. | (3 marks) |
| (b) | Outline the common applications for the Avoirdupois system. | (3 marks) |
| (c) | State the disadvantages of using the metric international unit system. | (4 marks) |

QUESTION 3

- (a) What is most commonly used syringe in small animal veterinary practice? (1 mark)
- (b) State the two types of hypodermic syringes and the various sizes in which they are commonly found. (4 marks)
- (c) Briefly explain why it is important to have calibration measures. (3 marks)
- (d) A 5kg cat is prescribed 10mg/kg of buprenorphine. The buprenorphine available as a 0.5mg/ml solution. Calculate the requires dose.(3 marks)
- (e) Define the term: Intravenous Fluid Therapy. (1 mark)
- (f) State the three elements of fluid therapy. (3 marks)

SECTION B

Answer any three (3) questions.

QUESTION 4

- (a) State and explain the three types of intravenous fluids available. (6 marks)
- (b) List six reasons for fluid therapy in veterinary medicine. (6 marks)
- (c) State the two most common complications of intravenous fluid therapy. (2 marks)
- (d) How best can the complications mentioned above be prevented. (6 marks)

QUESTION 5

- (a) A 60lb snake requires 21U/kg of insulin twice daily. How much U -100 insulin will the owner need to n 4 weeks. (10 marks)
- (b) From a 50% solution of dextrose, make 500ml of a 5% solution.
Calculate:
 - (i) The requires volume (3 marks)
 - (ii) The diluents (3 marks)
- (c) How may mg of acepromazine are in 1.2ml of a 10mg/ml solution (2 marks)
- (d) State two considerations that must be made when calculating insulating and Heparin dosing. (2 marks)

QUESTION 6

- (a) Give a brief explanation of Tuberculin syringe. (5 marks)
- (b) Describe three types of commonly used safety syringes. (3 marks)
- (c) State three benefits of using safety syringes. (3 marks)
- (d) Define the term Reconstitution (3 marks)
- (e) List six general reconstitution procedures for powdered drugs. (6 marks)

PAPER NO: 387/22/M05 - DRUG ADMINISTRATION

QUESTION 7

- (a) Outline the specific household equivalence and the total quantities to be administered for the following
- (i) Amoxicillin po 5ml bd $\frac{5}{7}$ (3 marks)
 - (ii) Adosuncopect po 15ml qid $\frac{3}{7}$ (3 marks)
 - (iii) Oral rehydration solution one cupful prn (3 marks)
- (b) Which system is used most often amongst (metric international, household, avoirdupois and apothecary. Justify your answer. (4 marks)
- (c) State seven disadvantages of the metric international unit system. (7 marks)

QUESTION 8

- (a) List ten signs and symptoms of dehydration in animals. (10 marks)
- (b) Briefly explain how you would perform a physical exam to assess for dehydration in animals. State at least five well explained physical exams. (10 marks)

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NATIONAL CERTIFICATE

IN

VETERINARY ASSISTANT

MODULE: Animal nursing

PAPER NO: 387/22/M06

DURATION: 3 Hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Section a: Answer all questions.
- 2) Section B: Question 5 is compulsory.
Answer any two (2) questions.
- 3) Do not write anything on any part of the question paper.

This paper consists of 3 printed pages.



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SECTION A: ANSWER ALL QUESTIONS

QUESTION 1

- a) What is shock? (4 marks)
- b) List any eight (8) signs of shock (8 marks)
- c) What is the first aid treatment for shock? (8 marks)

QUESTION 2

Design an admission form for H.I.P.H small Animal Practise. (20 marks)

SECTION B

QUESTION 3

What are the features of the following:

- a) Rabies certificate. (7 marks)
- b) Receipt (7 marks)
- c) Invoice (5 marks)
- d) What does 'RTGS' stand for? (1 marks)

QUESTION 4

- a) What is the difference between disposable and non-disposable bedding? (4 marks)
- b) Give three (3) examples of disposable and non-disposable bedding. (12 marks)
- c) Name any four (4) methods which can be used for providing heat to patients in the veterinary practise. (4 marks)

QUESTION 5

- a) Name bandage types which can be used for bandaging a patient with a fractured leg. (10 marks)
- b) What discharge instructions can you write for a client who came with a queen for a spray. (10 marks)

PAPER NO: 387/22/M06- ANIMAL NURSING

QUESTION 6

What is the procedure of cleaning a kennel with parvo virus.

(20 marks)

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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

MODULE: Pharmacology for VET Nurses

PAPER NO: 387/22/M04

DURATION: 3 hours

OCTOBER/NOVEMBER 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer any four (4) questions.**
- 2. Do not write anything on the question paper.**
- 3. Do not write your name on the answer booklet.**

This paper consists of 4 printed pages.



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QUESTION 1

- a) State any three (3) factors that affect the pharmacokinetics parameters below:
- i) Absorption (3 marks)
 - ii) Distribution (3 marks)
 - iii) Metabolism (3 marks)
 - iv) Elimination (3 marks)
- b) In relation to pharmacodynamics, define the following:
- i) Pharmacodynamics (2 marks)
 - ii) Agonist (2 marks)
 - iii) Antagonist (2 marks)
 - iv) Efficacy (2 marks)
 - v) Affinity (2 marks)
- c) Outline any three (3) routes of administration in animals. (3 marks)

QUESTION 2

Describe the following classes of drugs that act on the gastrointestinal tract, giving at least two (2) of drugs that fall under each class:

- a) Emetics (5 marks)
- b) Antiemetics (5 marks)
- c) Antidiarrheal drugs (5 marks)
- d) Antiulcer drugs (5 marks)
- e) Laxatives (5 marks)

QUESTION 3

- a) State any five (5) signs of pain in animals. (5 marks)
- b) Briefly describe the mechanism of action of NSAIDs. (5 marks)
- c) State any five (5) side effects of NSAIDs. (5 marks)
- d) List any five (5) examples of drugs used to manage pain. (5 marks)
- e) Briefly describe how you can administer an oral drug to an animal. (5 marks)

PAPER NO: 387/22/M04 - PHARMACOLOGY FOR VET NURSES

QUESTION 4

- a) Explain the following in relation to cardiovascular system:
- i) Hypertension (3 marks)
 - ii) Heart failure (3 marks)
 - iii) Inotropic agents (3 marks)
 - iv) Arrhythmia (3 marks)
- b) Outline the common signs and symptoms of diabetes in dogs or cats. (5 marks)
- c) Explain why anabolic steroids are classified as controlled substances. (3 marks)
- d) Briefly describe how diuretics work and give any three (3) examples of diuretics. (5 marks)

QUESTION 5

- a) Define the following terms giving relevant examples of each:
- i) Bacteriostatic (2 marks)
 - ii) Bactericidal (2 marks)
 - iii) Endoparasite (3 marks)
 - iv) Ectoparasite (3 marks)
 - v) Parasitosis (2 marks)
- b) Explain the mechanism of action of Avermectins and give three (3) examples of drugs that are classified as avermectins. (5 marks)
- c) Describe how penicillins work and give three (3) examples of penicillins. (5 marks)
- d) Differentiate between antifungal and antihelminthic. (3 marks)

QUESTION 6

- a) Define controlled substance and state the storage and handling requirements of controlled substances. (5 marks)
- b) State any five (5) controlled substances. (5 marks)
- c) State any five (5) sources of drugs and give examples of drugs from each class. (10 marks)
- d) List and describe any three (3) methods of disposing drugs. (5 marks)



QUESTION 7

- a) State any three (3) uses of barbiturates and give two (2) examples of barbiturates. (5 marks)
- b) Describe the FIFO and FEFO principles of stock management in vet pharmacy. (4 marks)
- c) Outline any two (2) advantages and two (2) disadvantages of the following methods of preservation:
 - i) Refrigeration (4 marks)
 - ii) Cryopreservation (4 marks)
 - iii) Room temperature (4 marks)
- d) State any four (4) routes of administration of drugs. (4 marks)

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HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)

NATIONAL CERTIFICATE

IN

4

VETERINARY TECHNOLOGY

MODULE: Pharmacology for VET Nurses

PAPER NO: 387/22/M04

DURATION: 3 hours

OCTOBER/NOVEMBER 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer any four (4) questions.
2. Do not write anything on the question paper.
3. Do not write your name on the answer booklet.



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QUESTION 1

- a) State any three (3) factors that affect the pharmacokinetics parameters below:
- | | |
|------------------|-----------|
| i) Absorption | (3 marks) |
| ii) Distribution | (3 marks) |
| iii) Metabolism | (3 marks) |
| iv) Elimination | (3 marks) |
- b) In relation to pharmacodynamics, define the following:
- | | |
|---------------------|-----------|
| i) Pharmacodynamics | (2 marks) |
| ii) Agonist | (2 marks) |
| iii) Antagonist | (2 marks) |
| iv) Efficacy | (2 marks) |
| v) Affinity | (2 marks) |
- c) Outline any three (3) routes of administration in animals. (3 marks)

QUESTION 2

Describe the following classes of drugs that act on the gastrointestinal tract, giving at least two (2) of drugs that fall under each class:

- | | |
|------------------------|-----------|
| a) Emetics | (5 marks) |
| b) Antiemetics | (5 marks) |
| c) Antidiarrheal drugs | (5 marks) |
| d) Antilulcer drugs | (5 marks) |
| e) Laxatives | (5 marks) |

QUESTION 3

- a) State any five (5) signs of pain in animals. (5 marks)
- b) Briefly describe the mechanism of action of NSAIDs. (5 marks)
- c) State any five (5) side effects of NSAIDs. (5 marks)
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- e) Briefly describe how you can administer an oral drug to an animal. (5 marks)

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- i) Hypertension (3 marks)
 - ii) Heart failure (3 marks)
 - iii) Inotropic agents (3 marks)
 - iv) Arrhythmia (3 marks)
- b) Outline the common signs and symptoms of diabetes in dogs or cats. (5 marks)
- c) Explain why anabolic steroids are classified as controlled substances. (3 marks)
- d) Briefly describe how diuretics work and give any three (3) examples of diuretics. (5 marks)

QUESTION 5

- a) Define the following terms giving relevant examples of each:
- i) Bacteriostatic (2 marks)
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 - iv) Ectoparasite (3 marks)
 - v) Parasitosis (2 marks)
- b) Explain the mechanism of action of Avermectins and give three (3) examples of drugs that are classified as avermectins. (5 marks)
- c) Describe how penicillins work and give three (3) examples of penicillins. (5 marks)
- d) Differentiate between antifungal and antihelminthic. (3 marks)

QUESTION 6

- a) Define controlled substance and state the storage and handling requirements of controlled substances. (5 marks)
- b) State any five (5) controlled substances. (5 marks)
- c) State any five (5) sources of drugs and give examples of drugs from each class. (10 marks)
- d) List and describe any three (3) methods of disposing drugs. (5 marks)

QUESTION 7

- a) State any three (3) uses of barbiturates and give two (2) examples of barbiturates. (5 marks)
- b) Describe the FIFO and FEFO principles of stock management in vet pharmacy. (4 marks)
- c) Outline any two (2) advantages and two (2) disadvantages of the following methods of preservation:
 - i) Refrigeration (4 marks)
 - ii) Cryopreservation (4 marks)
 - iii) Room temperature (4 marks)
- d) State any four (4) routes of administration of drugs. (4 marks)

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**HIGHER EDUCATION EXAMINATIONS COUNCIL
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NATIONAL CERTIFICATE

IN

VETERINARY TECHNOLOGY

SUBJECT: Veterinary Anatomy and Physiology PAPER NO: 387/22/M01

DURATION: 3 hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1) Answer all questions from section A.
- 2) Answer any three (3) questions from section B.
- 3) Do not write your name on the answer script.
- 4) Do not write anything on the question paper.

This paper consists of 3 printed pages.



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SECTION A: ANSWER ALL QUESTIONS

QUESTION 1

- a) Define the following terms:
- i) Anatomy (2 marks)
 - ii) Physiology (2 marks)
 - iii) Cell (2 marks)
 - iv) Element (2 marks)
 - v) Entropion (2 marks)
- b) Define any five (5) medical terms that you know. (10 marks)

QUESTION 2

- a) List the functions of the following:
- i) Respiratory system (5 marks)
 - ii) Lymphatic system (5 marks)
 - iii) Tongue (6 marks)
- b) List four (4) elements found in cells. (4 marks)

SECTION B: ANSWER ANY THREE QUESTIONS

QUESTION 3

- a) Describe the process of cardiac blood flow. (10 marks)
- b) Describe the stages involved in the digestive process. (10 marks)

QUESTION 4

- a) Describe the process of fertilisation in a bitch. (10 marks)
- b) State any three (3) muscles of mastication and their functions. (6 marks)
- c) Describe the following terms:
- i) Intrinsic muscles (2 marks)
 - ii) Extrinsic muscles (2 marks)

QUESTION 5

- a) Outline the parts of the urinary system. (4 marks)
- b) List the parts of the male reproductive tract. (6 marks)
- c) State and explain the stages of the oestrous cycle. (8 marks)
- d) Define a chromosome. (2 marks)

QUESTION 6

- a) Describe the process of phagocytosis. (5 marks)
- b) List any five (5) skin glands that you know. (5 marks)
- c) State and explain any five (5) factors that affect wound healing. (10 marks)

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**HIGHER EDUCATION EXAMINATIONS COUNCIL
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NATIONAL CERTIFICATE

IN

VETERINARY ASSISTANT

**MODULE: Veterinary Anatomy and
Physiology**

MODULE: 387/20/M01

DURATION: 3 Hours

NOVEMBER/DECEMBER 2023 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Answer ALL questions from Section A.
2. Answer ANY THREE (3) question from Section B.



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This paper consists of 3 printed pages.

PAPER NO: 387/20/M01 – VETERINARY ANATOMY AND PHYSIOLOGY

SECTION A

QUESTION 1

- (a) Define otitis externa and its cause. (2 marks)
- (b) Define lipoma (2 marks)
- (c) List the regions of the vertebrae, characteristic numbers and their position in the body. (15 marks)
- (d) Define a cell (1 mark)

QUESTION 2

- (a) List the functions of the respiratory system. (4 marks)
- (b) State any three (3) endocrine organs and the hormones they secrete. (6 marks)
- (c) List the components of appendicular skeleton. (4 marks)
- (d) Describe the structure and function of the neuron. (6 marks)

SECTION B

QUESTION 3

- (a) Describe the following cranial nerves which arise from the brain, types of nerve fibres and their functions:
 - (i) VII (3 marks)
 - (ii) IV (3 marks)
 - (iii) II (3 marks)
 - (iv) X (3 marks)
 - (v) I (3 marks)
- (b) Describe the three (3) layers which constitute the uterus (6 marks)
- (c) Define diffusion. (2 marks)

QUESTION 4

- (a) Describe the process of cardiac blood flow (10 marks)
- (b) Describe the process of blood clotting (10 marks)

PAPER NO: 387/20/M01 – VETERINARY ANATOMY AND PHYSIOLOGY

QUESTION 5

- (a) Describe the stages of image formation. (10 marks)
- (b) State and explain five (5) factors that affect wound healing. (10 marks)

QUESTION 6

- (a) List any five (5) functions of the liver (5 marks)
- (b) State any five (5) functions of the skull. (5 marks)
- (c) List four (4) types of teeth found in carnivores and their functions. (8 marks)
- (d) Define osmosis (2 marks)

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