**City & Guilds**

**7457-402 MARCH 2020**

**Level 3 Diploma in Small Animal Veterinary Nursing**

**Level 3 Anatomy and Physiology Knowledge Test – Paper 3**

**Wednesday 4 March 2020**

09:30 – 11:30

---

If provided, stick your candidate barcode label here.

---

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

*If additional answer sheets are used, enter the additional number of pages in this box.

*Before taking the examination, all candidates must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.

*Please ensure that you staple additional answer sheets to the back of this answer booklet, clearly labelling these with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.

*All candidates need to use a black/blue pen. Do not use a pencil or gel pen, unless otherwise instructed.

*If provided with source documents, these documents will not be returned to City & Guilds, and will be shredded. Do not write on the source documents.

*I declare that I had no prior knowledge of the questions in this examination and that I will not divulge to any person any information about the questions.

---

You should have the following for this examination

• a ball-point pen with blue or black ink

---

**General instructions**

• Use black or blue ball-point pen.

• The marks for questions are shown in brackets.

• This examination contains 13 questions. Answer all questions.

• Answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.

• Cross through any work you do not want to be marked.
1 Define the following anatomical directional terms:
   a) Caudal. (1 mark)

   b) Contralateral. (1 mark)

   c) Plantar. (1 mark)

2 State the following boundaries of the thoracic cavity:
   a) Cranial. (1 mark)

   b) Lateral. (1 mark)

   c) Caudal. (1 mark)

3 Name one palpable artery and state where it is anatomically positioned in a dog. (2 marks)

4 State the function of the following organelles in an animal cell:
   a) Mitochondrion. (1 mark)

   b) Ribosomes. (1 mark)

   c) Lysosomes. (1 mark)
5  Explain the function of the following glands: 
   a) Exocrine. (2 marks)

   b) Endocrine. (2 marks)

6  Explain the role and function of the liver and gall bladder in the digestion and metabolism of fats. (4 marks)
7 Explain the function of the following components of the peripheral nervous system:
   a) Somatic nervous system. (2 marks)
   b) Autonomic nervous system including the parasympathetic and sympathetic nervous systems. (6 marks)
8 Describe the structure and function of the following components of the eye:
   a) Cornea. (2 marks)

   b) Iris. (2 marks)

   c) Retina. (2 marks)

9 State four anatomical features specific to the digestive system of a Passerine bird. (4 marks)
10 Describe the following terms in relation to respiration:
   a) External respiration. (1 mark)

   b) Internal respiration. (1 mark)

   c) Tidal volume. (1 mark)

   d) Minute volume. (1 mark)

   e) Obligate nasal breathing. (1 mark)

11 Name the three extrinsic muscles of the forelimb. (3 marks)

12 List three functions of the kidney. (3 marks)
13 Explain the sequential pathway of an electrical impulse during each stage of the cardiac cycle in mammalian physiology. (12 marks)