

Advanced Veterinary Science Knowledge Assessment

Veterinary Science · Practice Test · 20 Questions

1. Which of the following helminth ova is typically spherical and possesses a thick, transparent shell with a single polar plug?

- A) *Toxocara canis*
- B) *Trichuris vulpis*
- C) *Capillaria* spp.
- D) *Ascaris suum*

2. The characteristic 'butterfly' pattern seen on radiographs of the thoracic spine in dogs with suspected intervertebral disc disease (IVDD) is most indicative of disc degeneration in which intervertebral spaces?

- A) C5-C6 and C6-C7
- B) T12-T13 and L1-L2
- C) L4-L5 and L5-L6
- D) C2-C3 and C3-C4

3. What is the primary mechanism of action for fluoroquinolone antibiotics in bacteria?

- A) Inhibition of cell wall synthesis
- B) Disruption of protein synthesis by binding to the 30S ribosomal subunit
- C) Inhibition of DNA gyrase and topoisomerase IV
- D) Interference with folic acid synthesis

4. In cattle, what is the most common cause of acute, fatal poisoning following the ingestion of red maple (*Acer rubrum*) leaves?

- A) Nephrotoxicity due to tannins
- B) Hemolytic anemia due to compounds like gallic acid
- C) Hepatotoxicity from syrphyllin
- D) Cardiotoxicity from cardiac glycosides

5. Which endocrine disorder in horses is characterized by abnormal proliferation of the pars intermedia of the pituitary gland, leading to increased cortisol production?

- A) Equine Cushing's Disease (PPID)
- B) Equine Metabolic Syndrome (EMS)
- C) Hypothyroidism
- D) Adrenal Insufficiency

6. The murmur of mitral regurgitation in dogs is typically best auscultated over which anatomical location?

- A) Right base (pulmonic/aortic valves)
- B) Left base (pulmonic/aortic valves)
- C) Left apex (mitral valve)
- D) Right apex (tricuspid valve)

7. What is the presumptive diagnosis for a sudden onset of collapse, severe weakness, and bradycardia in a young, active dog with a history of recent grooming?

- A) Addison's disease (hypoadrenocorticism)
- B) Congestive heart failure
- C) Diabetic ketoacidosis
- D) Canine parvovirus infection

8. In avian medicine, what is the primary clinical sign of hypocalcemia in birds?

- A) Respiratory distress
- B) Neurological signs such as tremors and seizures
- C) Gastrointestinal stasis
- D) Hemorrhagic enteritis

9. Which of the following zoonotic diseases is transmitted primarily through the bite of infected ticks and can cause fever, arthralgia, and a characteristic rash?

- A) Leptospirosis
- B) Brucellosis
- C) Rocky Mountain Spotted Fever
- D) Toxoplasmosis

10. The condition known as 'white muscle disease' in livestock is caused by a deficiency of which essential nutrient?

- A) Selenium
- B) Copper
- C) Zinc
- D) Iron

11. Which type of fracture is characterized by a break in the bone that extends through the entire thickness of the bone, but without displacement of the fragments?

- A) Greenstick fracture
- B) Comminuted fracture
- C) Complete fracture
- D) Fissure fracture

12. What is the most common cause of feline urolithiasis (bladder stones) in adult cats?

- A) Calcium oxalate
- B) Struvite
- C) Urate
- D) Cystine

13. The surgical procedure to create an opening into the stomach is called:

- A) Esophagostomy
- B) Gastrostomy
- C) Duodenostomy
- D) Jejunostomy

14. Which viral disease in dogs is characterized by neurological signs, including chewing gum fits, and is often fatal?

- A) Canine Distemper Virus
- B) Canine Adenovirus
- C) Canine Parvovirus
- D) Canine Coronavirus

15. In pigs, the term 'splenic torsion' refers to:

- A) A bacterial infection of the spleen
- B) A twisting of the spleen on its mesentery
- C) A rupture of the spleen due to trauma
- D) An inflammatory condition of the spleen

16. What is the primary neurotransmitter involved in the 'fight or flight' response in the sympathetic nervous system?

- A) Acetylcholine
- B) Dopamine
- C) Norepinephrine
- D) Serotonin

17. Which diagnostic imaging technique uses magnetic fields and radio waves to create detailed images of soft tissues?

- A) Computed Tomography (CT)
- B) Radiography (X-ray)
- C) Magnetic Resonance Imaging (MRI)
- D) Ultrasonography

18. The disease 'bovine spongiform encephalopathy' (BSE) is a prion disease that affects which species?

- A) Sheep
- B) Goats
- C) Cattle
- D) Deer

19. Which of the following is a characteristic hematological finding in a horse with Equine Infectious Anemia (EIA)?

- A) Thrombocytopenia
- B) Eosinophilia
- C) Leukocytosis
- D) Polycythemia

20. What is the term for the surgical removal of the adrenal glands?

- A) Nephrectomy
- B) Splenectomy
- C) Adrenalectomy
- D) Hysterectomy