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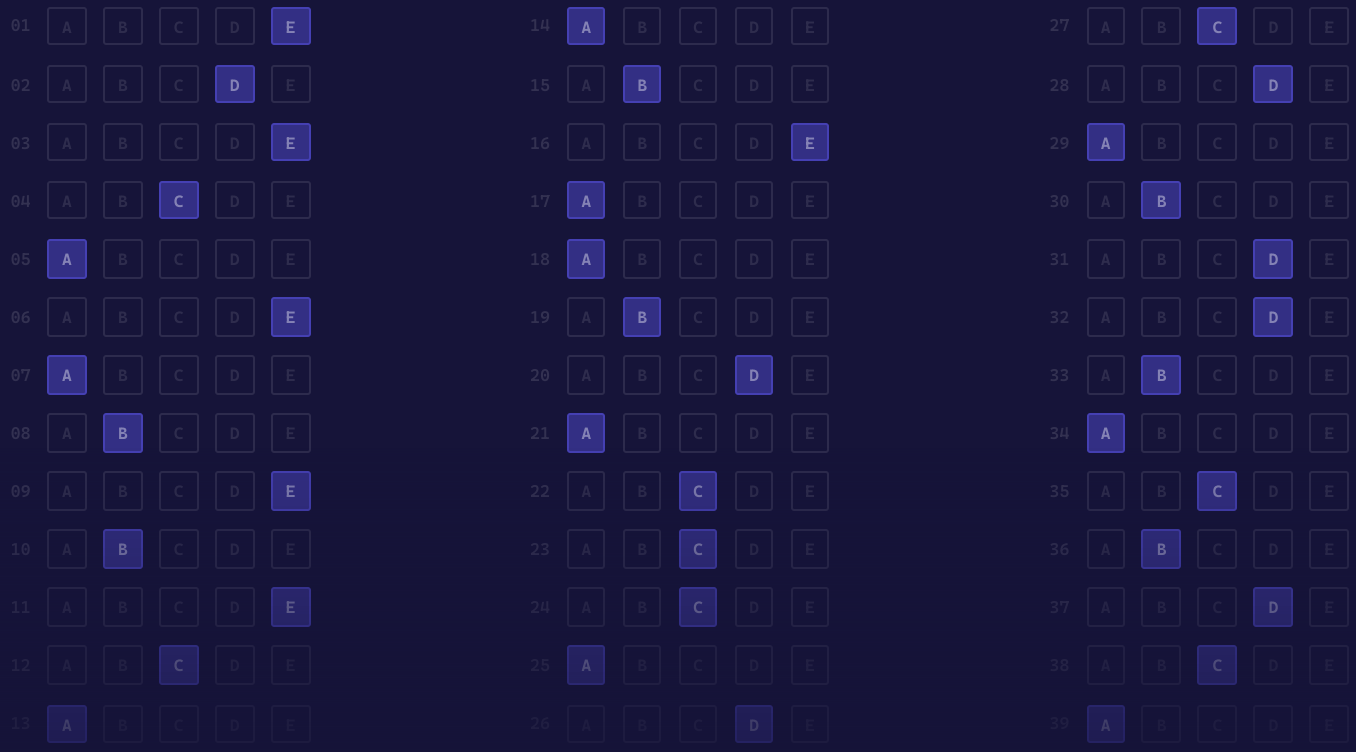

PRACTICE QUESTIONS

American Veterinary Medical Association (AVMA)

BCSEF

Basic and Clinical Sciences Exam French

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for American Veterinary Medical Association (AVMA) `BCSEF`, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, `BCSEF`
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

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QUESTION 1 SINGLE CHOICE

On a mediolateral radiograph of the thorax of a normal dog, which structure is seen as a soft tissue opacity coursing from the carina, directed caudodorsally and to the left, before dividing into lobar bronchi?

A Trachea

B Right principal bronchus

C Left principal bronchus

D Mainstem (principal) bronchus at the carina

ANSWER C

WHY The left principal bronchus is the more cranial branch off the carina and courses caudodorsally and to the left before giving off the left cranial and left caudal lobar bronchi. The right principal bronchus courses more caudoventrally and to the right, supplying the right cranial, middle, caudal, and accessory lobe bronchi. The trachea lies cranial to the carina, not beyond it.

QUESTION 2 SINGLE CHOICE

In a normal dog at rest, the cardiac output is approximately:

A 10 mL/kg/min

B 30 mL/kg/min

C 100 mL/kg/min

D 300 mL/kg/min

ANSWER C

WHY Normal resting cardiac output in the dog is approximately 100 mL/kg/min (roughly 2 L/min/m^2 body surface area). Values around 10 or 30 mL/kg/min are far too low and incompatible with life, while 300 mL/kg/min corresponds approximately to the maximum exercise cardiac output (about 3 times resting).

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QUESTION 3 MULTIPLE CHOICE

Which of the following drugs are macrocyclic lactones used as parasiticides in dogs? (Choose two.)

- **A** **Ivermectin**
- **B** Fenbendazole
- **C** **Milbemycin oxime**
- **D** Praziquantel
- **E** Pyrantel pamoate

ANSWER **A** · **C**

WHY Ivermectin and milbemycin oxime are both macrocyclic lactones (avermectins/milbemycins) that act by binding glutamate-gated chloride channels in nematode and arthropod nerve and muscle cells, causing paralysis. Fenbendazole is a benzimidazole, praziquantel is a pyrazinoisoquinoline, and pyrantel is a tetrahydropyrimidine — none are macrocyclic lactones.

QUESTION 4 SINGLE CHOICE

Which of the following bacterial genera is a Gram-positive, beta-hemolytic, catalase-positive coccus that produces coagulase?

- **A** Streptococcus
- **B** **Staphylococcus**
- **C** Enterococcus
- **D** Corynebacterium

ANSWER **B**

WHY Staphylococcus species (particularly S. aureus and S. intermedius group) are Gram-positive cocci that are catalase-positive (differentiating them from Streptococcus and Enterococcus, which are catalase-negative) and produce coagulase, which differentiates the coagulase-positive staphylococci from coagulase-negative species such as S. epidermidis.

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QUESTION 5 TRUE FALSE

All viruses are obligate intracellular parasites that require living host cells in order to replicate.

A **True**

B False

ANSWER **A**

WHY True. Viruses lack the machinery for independent replication (they have no ribosomes and a limited genome) and therefore must use living host cells to reproduce. This is a defining feature distinguishing viruses from other infectious agents such as bacteria, fungi, and parasites.

QUESTION 6 SINGLE CHOICE

In the dog, the stomach lies primarily in which region of the abdomen, with the pylorus angled toward the right side?

A **Left hypochondriac region**

B Right hypochondriac region

C Umbilical region

D Left inguinal region

ANSWER **A**

WHY The canine stomach lies principally in the left hypochondriac region, with the fundus and body on the left of midline and the pylorus directed toward the right, ending near the midline at the pyloric antrum. This asymmetry explains why gastric dilatation-volvulus rotates around the long axis with displacement predominantly to the right.

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QUESTION 7 SINGLE CHOICE

Which class of drugs blocks muscarinic acetylcholine receptors and is used clinically to increase heart rate in bradyarrhythmias?

A Beta-2 agonists

B Anticholinergics (parasympatholytics)

C Alpha-2 agonists

D Cholinergics (parasympathomimetics)

ANSWER B

WHY Anticholinergics (parasympatholytics) such as atropine and glycopyrrolate block muscarinic acetylcholine receptors at the SA and AV nodes, decreasing vagal tone and thereby increasing heart rate — the basis for their use in symptomatic bradyarrhythmias. Beta-2 agonists act on smooth muscle (bronchodilation), alpha-2 agonists like dexmedetomidine actually slow the heart rate, and cholinergics would worsen bradycardia.

QUESTION 8 SINGLE CHOICE

Which of the following best describes the predominant cell type in acute inflammation?

A Lymphocytes

B Macrophages

C Neutrophils (polymorphonuclear leukocytes)

D Plasma cells

ANSWER C

WHY Acute inflammation is characterized by the predominant infiltration of neutrophils (heterophils in some species terminology), which are the first leukocytes to migrate from blood vessels in response to chemotactic signals. Lymphocytes and plasma cells predominate in chronic inflammation, while macrophages characterize granulomatous inflammation and chronic responses.

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QUESTION 9 SINGLE CHOICE

Which serum biochemical parameter is most directly associated with renal glomerular filtration in small animals?

A Alanine aminotransferase (ALT)

B **Creatinine**

C Alkaline phosphatase (ALP)

D Total bilirubin

ANSWER **B**

WHY Creatinine is produced from the non-enzymatic breakdown of muscle phosphocreatine and is filtered almost entirely by the glomerulus with minimal tubular reabsorption, making serum creatinine a direct indicator of glomerular filtration rate. ALT and ALP are markers of hepatocellular and cholestatic liver disease respectively, and total bilirubin reflects hepatic and hemolytic disorders rather than renal function.

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