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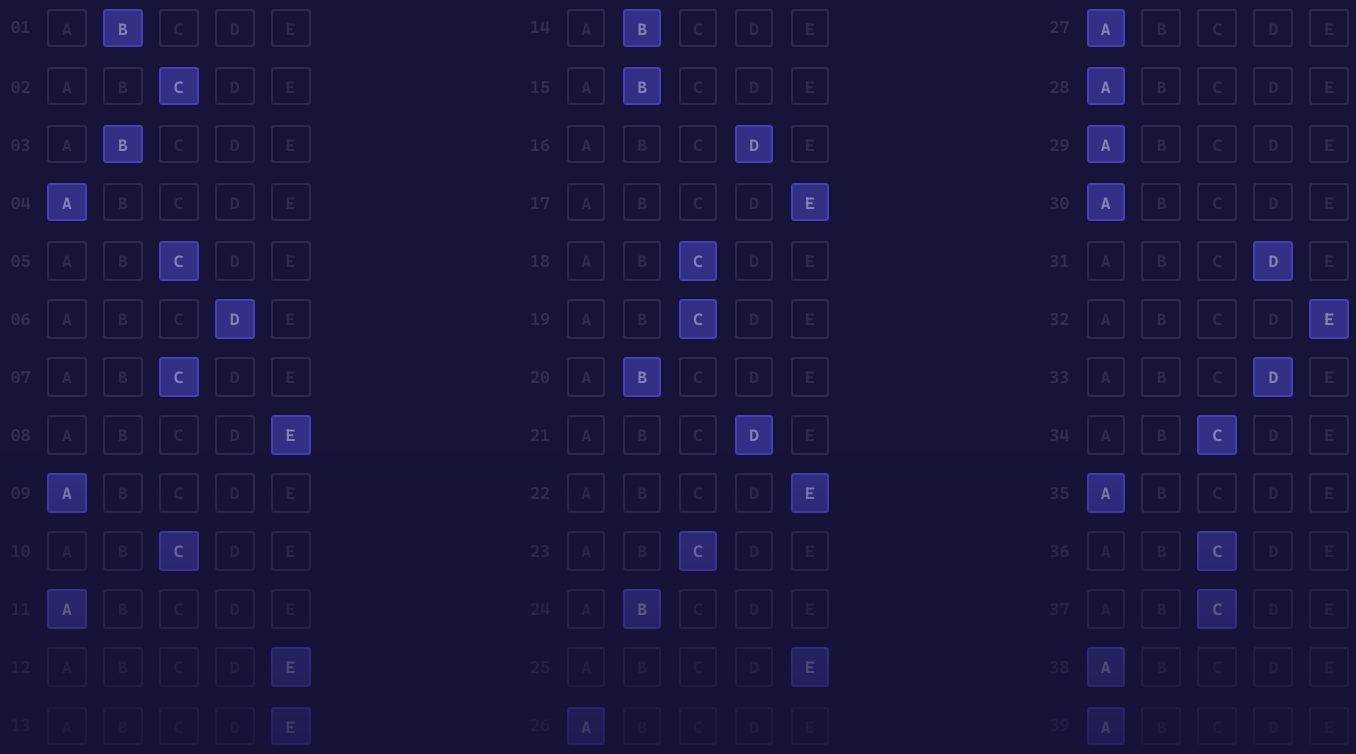

PRACTICE QUESTIONS

American Association For Lab Animal Science (AALAS)

LAT

LABORATORY ANIMAL TECHNICIAN

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for American Association For Lab Animal Science (AALAS) `LAT`, 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, `LAT`
- 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

Which inbred strain of mouse is albino and is commonly used as the general-purpose laboratory mouse in biomedical research?

A C57BL/6

B BALB/c

C DBA/2

D C3H/He

ANSWER B

WHY BALB/c is an albino inbred strain widely used as a general-purpose laboratory mouse. C57BL/6 is black (not albino), DBA/2 is light brown, and C3H/He is agouti, so A, C, and D are incorrect.

QUESTION 2 SINGLE CHOICE

According to the Guide for the Care and Use of Laboratory Animals, what is the recommended temperature range for a conventional mouse housing room?

A 16 to 19 °C (61 to 66 °F)

B 20 to 26 °C (68 to 79 °F)

C 27 to 30 °C (81 to 86 °F)

D 31 to 34 °C (88 to 93 °F)

ANSWER B

WHY The Guide recommends a temperature range of 20 to 26 °C (68 to 79 °F) for conventional mouse housing rooms. The other ranges are either too low or too high and would fall outside the recommended environmental limits.

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QUESTION 3 SINGLE CHOICE

Which of the following is the most effective method for preventing the spread of infectious agents between animal cages on a ventilated rack?

A **Changing gloves between cages of different animals**

B Disinfecting the work surface between cages

C Handling all cages on a rack in the same animal room only

D Wearing a single lab coat in the room for the entire day

ANSWER A

WHY Changing gloves between cages of different animals is the single most effective practice to prevent cross-contamination between cages, because hands/gloves directly contact each cage and its animals. Disinfecting work surfaces helps but is secondary; the other options do not address cage-to-cage cross contamination.

QUESTION 4 SINGLE CHOICE

A rat is observed hunched in the corner of its cage with a rough, unkempt haircoat and rapid breathing. These signs are most consistent with which of the following?

A Normal post-weaning behavior

B A healthy response to a new diet

C **Signs of pain or illness**

D Normal exploratory activity

ANSWER C

WHY Hunched posture, ruffled/rough haircoat, and changes in respiration are classic non-specific clinical signs of pain, distress, or illness in rats. The other options describe normal behavior and do not match these clinical indicators.

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QUESTION 5 SINGLE CHOICE

Which inhalant anesthetic is most commonly used for general anesthesia in laboratory rodents because of its ease of administration and rapid recovery?

A Methoxyflurane

B Isoflurane

C Chloroform

D Diethyl ether

ANSWER B

WHY Isoflurane is the most commonly used inhalant anesthetic for rodent survival surgery because it is easy to administer via a precision vaporizer, has a rapid onset, and allows rapid recovery. Methoxyflurane is no longer commercially available in the U.S.; chloroform and diethyl ether are not appropriate due to safety and humane concerns.

QUESTION 6 SINGLE CHOICE

When entering an animal housing room, which item of PPE is most important for the technician to wear to protect both the animals and the personnel?

A Sterile surgical gloves

B Dedicated lab coat or gown

C A disposable hairnet

D Closed-toe leather boots

ANSWER B

WHY A dedicated lab coat or gown is the standard PPE required when entering an animal housing room; it protects personnel from allergens and dander and helps prevent the transfer of contaminants to and from the animals. Sterile surgical gloves are not required for routine housing entry, and the other options are not standard requirements.

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QUESTION 7 SINGLE CHOICE

In the laboratory rat, which organ is the primary site of drug metabolism and biotransformation following oral administration?

A Kidney

B Liver

C Spleen

D Lung

ANSWER B

WHY The liver is the primary site of drug metabolism and biotransformation because orally absorbed compounds pass through the hepatic portal system (first-pass effect) before reaching systemic circulation. The kidney filters blood but is not the main site of biotransformation; the spleen and lung play only minor roles in xenobiotic metabolism.

QUESTION 8 SINGLE CHOICE

Which restraint technique is appropriate for administering a subcutaneous injection to a mouse?

A Holding the mouse by the tip of the tail with one hand and grasping the scruff of the neck with the other

B Wrapping the mouse tightly in a towel until it stops moving

C Pinning the mouse to the cage lid and pressing on its thorax

D Grasping the mouse by the base of the tail and lifting it over a cage of unfamiliar mice

ANSWER A

WHY The standard manual restraint for a mouse is to grasp the base (not the tip) of the tail and, while supporting the body on a surface or in the hand, scruff the loose skin at the back of the neck between thumb and forefinger. The other techniques are incorrect or inhumane.

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QUESTION 9 SINGLE CHOICE

A technician is performing a daily health check on a group of C57BL/6 mice and notices one mouse has a sudden loss of body condition, hunched posture, and is isolation-housed away from cage mates. According to AALAS guidelines on recognizing pain and distress, what is the MOST appropriate first action?

A Document the observations and continue monitoring the animal for 24 hours to see if the signs resolve on their own

B Immediately notify the attending veterinarian or supervisor and document the observations

C Administer an analgesic from the cage-side supply to relieve the apparent discomfort

D Remove the animal from the room and place it in a clean cage in a separate holding area

ANSWER **B**

WHY Per AALAS training, any signs of illness, pain, or distress in a research animal must be reported promptly to the attending veterinarian or supervisor. Self-treating an animal or delaying reporting can compromise animal welfare and study data. The technician's role is to observe, document, and report — not to diagnose or treat.

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