

AAALAC exam on writing animal research protocols required for all PIs and IACUC members:

1. Which is not a function of the IACUC?
 - A. Purchase healthy animals on behalf of the investigators.
 - B. Conduct reviews of the animal care and use program on a semi-annual basis.
 - C. Inspect the animal facilities on a semi-annual basis.
 - D. Review and approve animal use protocols submitted by investigators.
2. The USDA AWA regulations do not currently apply to:
 - A. Nonhuman primates.
 - B. Dogs, pigs, and sheep.
 - C. Nonvertebrates, laboratory mice, and laboratory rats.
 - D. Hamsters and gerbils.
3. Which of the following institutions must follow PHS guidelines for animal research?
 - A. Those that use vertebrate animals for research, teaching, or testing.
 - B. Those that use any animals for research, teaching, or testing.
 - C. Those that accept USDA research funds.
 - D. Those that accept PHS funding.
4. Unlike the USDA AWA regulations, when applicable, PHS Policy applies to:
 - A. All animal species used in research.
 - B. All animal species except mice and rats.
 - C. All vertebrate species used in research.
 - D. Invertebrate species used in research.
5. Before making a significant change in your animal procedures, you must:
 - A. Be confident that the IACUC would have approved it upon review.
 - B. Get approval for the change from the IACUC.
 - C. Consult with the Institutional Official.
 - D. Consult with the appropriate chief or dean of research.
6. If procedures involving more than momentary or slight pain or distress to animals are proposed, the Animal Welfare Act Regulations and Standards require:
 - A. A consultation with a veterinarian in the planning stages of animal experiments.
 - B. That a veterinarian be appointed as a consultant on the project.
 - C. A consultation with the IACUC chairperson in the planning stages of animal experiments.
 - D. That the IACUC chairperson be appointed as a consultant on the project.
7. Which of the following is not true regarding the assurance provided by an investigator to the IACUC that alternatives to painful or stressful procedures are not available?
 - A. If a database search is used, the name of the database, date of the search, time period covered, and keywords or search strategy must be given in the narrative.
 - B. The assurance must be written, usually as part of the animal protocol form.
 - C. All three "Rs" by Russell and Burch must be addressed; not just replacement.
 - D. A report of the lab's experience with the current technique may be used in place of an alternatives search.

8. Which of the following is true regarding the USDA Animal Welfare Act Regulations and Standards and duplication of experiments?
 - A. The investigator may decide if duplication is necessary.
 - B. The IACUC is not allowed to decide if duplication is necessary.
 - C. The institution can overrule an IACUC decision and allow a duplicative experiment to proceed.
 - D. Unnecessary duplication of experiments is not allowed.
9. Humane endpoint criteria describe when it is time to:
 - A. Submit an updated animal protocol form.
 - B. Notify the IACUC of the need for more animals to achieve statistical significance.
 - C. Intervene in a study, sometimes by euthanizing an animal.
 - D. Seek medical care from a veterinarian.
10. Euthanasia is:
 - A. The act of killing animals by methods that preserve physiologic function after death.
 - B. The act of killing animals by methods that induce rapid unconsciousness and death without pain or distress.
 - C. The act of killing animals for experimental purposes.
 - D. The emotional state of a human or animal under distress.
11. Annually, an institution must report the number of animals used by pain/distress category to the:
 - A. United States Department of Agriculture (USDA).
 - B. Public Health Service (PHS).
 - C. Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC).
 - D. American Association for Laboratory Animal Science (AALAS).
12. Who is generally given institutional responsibility for deciding if an individual researcher is properly trained to perform animal procedures, as required by law?
 - A. The investigator.
 - B. The research technicians who perform the animal experiments.
 - C. The IACUC.
 - D. The institutional official in charge of the research program.
13. All performing animal procedures must be trained to do so:
 - A. Before any procedures are performed.
 - B. By the end of the experiments.
 - C. Unless they have doctoral level or medical degrees.
 - D. Unless they receive a waiver from their supervisor.
14. Which statement is false regarding the occupational health and safety program?
 - A. Risk assessment for hazards is a necessary component of the program.
 - B. The program should include health care procedures.
 - C. Personnel should receive training about the program.
 - D. The program may be limited to employees.

15. In the animal protocol form, the investigator should:
- A. Identify hazardous agents to be used in the proposed animal study.
 - B. Verify that personnel are informed or enrolled in the occupational health and safety program.
 - C. Assure that personnel exposure to hazardous agents will be avoided or minimized.
 - D. All of the above.
16. Which of the following is false concerning prolonged restraint of animals?
- A. It should not be considered a normal method of housing.
 - B. The period of restraint should be the minimum required to achieve experimental objectives.
 - C. It can be justified as a convenience for the research staff.
 - D. The restraint method used should be the least restrictive possible that will allow achievement of experimental objectives.
17. When proposing to restrict food or water for laboratory animals, which of the following is true?
- A. Short-term restriction is allowed without scientific justification.
 - B. Restriction for periods longer than pre-surgical preparation is considered to cause pain and distress.
 - C. IACUC approval is necessary only for long-term restriction.
 - D. Animal monitoring procedures are necessary only for restriction periods greater than 24 hours.
18. Which of the following is true regarding allegations of misuse or mistreatment of animals or noncompliance with federal mandates on animal welfare?
- A. Individuals should first report an allegation to the Institutional Official.
 - B. Allegations must be investigated by the IACUC.
 - C. Allegations are investigated only when made by the institution's employees.
 - D. When allegations are proven true, only the Institutional Official can impose disciplinary procedures.
19. Surgery that penetrates and exposes a body cavity or produces substantial physical impairment is described as what kind of surgery?
- A. Minor.
 - B. Major.
 - C. Survival.
 - D. Non-survival.
20. Which of the following would not be accepted by an IACUC as the sole justification for performing multiple major survival surgeries?
- A. Cost savings.
 - B. Scientific need.
 - C. Conservation of rare or endangered species.
 - D. Clinical need due to medical complications.

21. A dedicated surgery suite must be used for which type of surgery?
- A. Non-survival surgery.
 - B. Major survival surgery on rodents.
 - C. Major survival surgery on non-rodent mammals.
 - D. Major non-survival surgery on non-rodent vertebrates.
22. Which of the following statements is false regarding postoperative analgesia:
- A. If a procedure is expected to cause pain in a human, it must be assumed to be painful in animals.
 - B. If an animal does not overtly display pain following a procedure, it does not need an analgesic.
 - C. A veterinarian must be consulted on the analgesic agent, dose, route, frequency, and duration of treatment.
 - D. Postoperative analgesia may be initiated by the use of analgesics prior to surgery.
23. Which of the following statements is true regarding care of an anesthetized animal during surgery?
- A. Intraoperative care does not need to be documented for USDA-covered species.
 - B. Intraoperative care refers to the quality of surgical and aseptic technique.
 - C. Intraoperative care should aim to maintain a near normal state of the animal's physiology.
 - D. If adequate intraoperative care is provided, vital signs monitoring can be omitted.
24. Which of the following statements are true regarding the description of surgical complications in the protocol form:
- A. May omit describing possible surgical complications if the same surgical procedure has been performed previously without problem.
 - B. May state only that all surgical complications will be referred to the veterinary staff.
 - C. Can use professional qualifications to assure that surgical complications will not occur.
 - D. Should describe expected surgical complications and methods of addressing each complication.
25. A simple rule to prevent excess blood collection in an animal is to collect no more than what percentage of body weight as blood at one time?
- A. 1%.
 - B. 2%.
 - C. 3%.
 - D. 4%.