

1. Match the category of animal health product with its function/use:

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|---|--------------|----------------------------------|
| a. vaccines | <u> e </u> | reduce pain, fever, swelling |
| b. antibiotics | <u> c </u> | supplement minerals and vitamins |
| c. nutrient supplements | <u> d </u> | reduce parasite burdens |
| d. parasiticides | <u> a </u> | stimulate the immune system |
| e. analgesics/antipyretics/ant-inflammatories | <u> b </u> | prevent and treat disease |

2. Three factors that can affect the efficacy of animal health products during storage, handling and use are: (circle the correct answers)

- a. Time
- b. Humidity
- c. Temperature
- d. Melting point
- e. Light

3. True or **False** It is only necessary to be concerned about temperature and light while a vaccine is being used at the chute.

4. All the recommendations for proper handling, storage, and administration of animal health products can be found on the labelling for the product.

5. True or **False** Unopened containers of products that have expired are guaranteed to be efficacious.

6. True or **False** Product in opened containers will not deteriorate over time if it is stored under proper conditions.

7. When using vaccines that have to be mixed(rehydrated) prior to use, a good rule of thumb is to not mix more vaccine than can be used in (circle correct answer: **1 hr**, 2 hr, 4 hr, 8 hr) of time.

8. Which of the following are good general guidelines to follow for vaccines. Circle all that apply.

- a. Transport, store and handle at ambient temperature
- b. Minimize exposure to light
- c. Keep vaccines cool during transportation, storage and use
- d. Expose to light to increase activity

9. Which of the following are reasons to change needles frequently? Circle all that apply.

- a. maintain a sharp needle to reduce irritation at the injection site
- b. maintain a clean needle to avoid contaminated injection sites
- c. avoid introducing foreign materials into product containers when reloading syringes
- d. none of these. Changing needles frequently is not necessary

10. Which of the following are accepted rules of thumb for changing needles? Circle all that apply.

- a. Change every 10-20 injections
- b. Change every 50 injections
- c. Change each time the multidose syringe has to be reloaded
- d. Change daily before starting the day's work

11. Syringes utilized to administer vaccines should be

- a. cleansed with detergent after each use
- b. cleansed with disinfectant after each use
- c. cleansed with hot, clean water after each use

12. Which of the following are considered extra-label drug use? Circle all that apply.

- a. use of a product in a species of animal that is not listed on the label
- b. use of a product for a disease or symptoms not listed on the label
- c. use of a product at dosage levels higher than stated on the label
- d. using a route of administration not listed on the label
- e. administering a product under the skin when the label calls for subcutaneous injection

13. Withdrawal time (circle all that apply)

- a. is not of any concern to beef producers
- b. is listed on the label and packaging for animal health products
- c. is the amount of time that must pass in order for tissue residues of an animal health product to decrease to concentrations considered safe by the FDA
- d. must be extended when products are used extra-label

14. Extra-label drug use is allowed if (circle all that apply)

- a. the producer decides there are no other alternatives
- b. authorized by a veterinarian
- c. authorized by a veterinarian and veterinarian-client-patient relationship exists

15. Circle the following correct recommendations

- a. for subcutaneous injections use 0.5 to 1.0 inch needle
- b. for intramuscular injections use 1.5 to 2.0 inch needle
- c. for subcutaneous injections use 1.0 to 1.5 inch needle
- d. for intramuscular injections use 1.0 to 1.5 inch needle

16. Injection site lesions (circle all that apply)

- a. are a food quality issue
- b. are a food safety issue
- c. result in trim loss from beef products
- d. not of concern to the beef industry

17. Injection site lesions are caused by

- a. irritation from injected animal health products
- b. irritation from damaged or dull needles
- c. contamination of the injection site
- d. all of the above

18. Which of the following will reduce injections site lesions and losses from lesions?

- a. use subcutaneous rather than intramuscular route of administration
- b. place all injections in the neck region
- c. change needles frequently
- d. do not inject too much product in a single location