<u>Veterinary Science</u>

<u>Contest Description and Rules:</u>

Please direct questions to:

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This contest is designed to assess student knowledge, application, analytical and evaluation abilities in the area of animal care, veterinary skills, and disease and parasite knowledge. Four students per team will be allowed to compete in the contest. Each team member will individually complete the written test, math practicum, parasite identification, breed identification, and tool/equipment identification. The hands-on practicum will be completed as a team. The team score will be based on the top three individual scores plus the hands-on team practicum.

The contest will cover the following types of animals:

- Avian
- Beef Cattle
- Cats
- Dairy Cattle

- Dogs
- Goats
- Horses
- Rabbits

- Rodents
- Sheep
- Swine

Equipment: each participant must have a clean, free of notes clipboard, two sharpened **No. 2 pencils,** and an electronic calculator. Calculators used in this event should be battery-operated, non-programmable, and silent with large keys and large displays. Calculators should have only the functions: addition, subtraction, multiplication, division, equals, percent, square root, +/- key, and one memory register. NO OTHER calculators will be allowed during the contest.

A). Written Test 50 points total.

Written test - Fifty multiple choice questions worth 1 point per question
Overall Topics include:
- Anatomy and physiology
- Breeding and genetics
- Breeds and grooming
- Disease and parasites
- Housing, management, and safety

<u>**LISTING OF TOPIC AREAS FOR THE WRITTEN EXAM**</u>

1) ANATOMY AND PHYSIOLOGY
   a) Skeletal
      i)   Avian
      ii) Mammalian
   b) Body part ID
      i)   Avian
      ii) Mammalian
   c) Digestion
      i)   Parts how they function
      ii) How they function
   d) Reproduction
      i)   Parts and how they function
      ii) Comparisons of male and female
      iii) Gestation, Parturition, Litter size, Estrus Cycles
   e) Nervous System
      i)   Components and how they work
      ii) Sense organs- how they work (eyes, nose, mouth, ears)
   f) Circulatory system
      i)   Arteries, veins, capillaries
      ii) Blood Composition
      iii) Temperature regulation for homeostasis
   g) Respiratory System
      i)   Parts and how they function
      ii) Temperature Regulation for Homeostasis

2) Diseases
   a) Causes
   b) Treatments/cures
   c) Prevention
   d) Id common diseases
      i)   Avian
      ii) Mammalian

3) Reproduction and Genetics
   a) Math components may be included in this topic
   b) Basic genetic knowledge
      i)   Dominant/recessive genes
      ii) Punnett squares
      iii) Phenotypes

4) Breeds
   a) Uses and traits
   b) Categories length/ height measurement
   c) Unique features of breeds

5) Equipment
   a) Grooming and restraints

b)   Proper use and ID

6) Housing and Management
a)   Housing
b)   Environmental Needs
c)   First Aid
d)   Health and Safety Precautions

B). Math Practicum – 25 points

Listing of possible samples for math applications practicums: questions may include conversations, dose calculations, dilutions, feed rations/labels, and animal breeding populations calculations. Non-programmable calculators may be used.

You are administering an oral drug to a dog and want to deliver 20 mg of drug per kg of body weight. Each pill contains 100 mg of the drug. How many pills would you give a dog that weighs 45 lb? [2.2 lb = 1 kg}

A.   1
B.   2
C.   3
D.   4

You have a sick dog in your clinic that is severely dehydrated. You want to deliver 100 ml of fluid to the dog using an intravenous catheter drip. The drop factor of the drip is 10 drops per ml. What is the drip rate needed (drops per minute) to deliver the fluid over the course of 30 minutes?

A.   3 drops per minute

B.   17 drops per minute

C.   25 drops per minute

D.   33 drops per minute

You are injecting a solution into a cat and want to deliver 5 mg of drug per kg of body weight. Each ml of injectable solution contains 10 mg of the drug. How many ml of injectable solution would you give a cat that weighs 9 lb? [2.2 lb = 1 kg]

A.   1 ml
B.   2 ml
C.   3 ml
D.   4 ml

C). Tool/ Equipment identification – 20 points

There will be 20 tool/equipment items to identify that will be worth 1 point each. A code sheet will be given to each participant listing potential items. Photos, paintings, or actual specimens

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may be used as samples. Refer to Wisconsin FFA CDE handbook for specific items.

D). Parasite Identification – 20 points

There will be 10 parasites to identify that will be worth 2 points each. A code sheet will be given to each participant listing potential items. Photos, paintings/drawings, or models may be used as samples. Digestive organs and anatomical parts from the cow, horse, chicken, and dog may be used. Refer to Wisconsin FFA CDE handbook for specific items.

E). Animal Breed Identification- 40 points

There will be 20 breeds to identify that will be worth 2 points each. A code sheet will be given to each participant listing potential items. Photos, paintings/drawings, or models may be used as samples. Refer to Wisconsin FFA CDE handbook for specific items.

F). Hands-on Practicum – 45 points

The hands-on practicum will be completed as a team. Each team will work together to solve a presented problem, complete a task, and/or answer questions using a model. Tasks will be evaluated on a pass-fail basis.

List of potential practicum activities:

- Handling of medical equipment
- Giving Vaccinations (intramuscular and subcutaneous)
- Filling a syringe
- Feed Rations
- Applying bandages to small animals
- Proper safety precautions

G). Tie-Breakers

Team tie-breakers will be settled in the following order:

(1) Combined individual scores on the identification sections (C, D, & E)
(2) Combined individual scores on the written exam
(3) Combined individual scores on the math practicum
(4) Team Hands-on practicum score

Individual tie-breakers will be settled in the following order:

(1) Combined score on the identification sections (C, D, & E)
(2) Written exam
(3) Math practicum

H). Vet Science Scantron

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