

Small Animal Vet Science CDE

Revised 9/2018

CDE purpose:

This career development event is designed to assess student knowledge, application, analytical, and evaluation abilities, in the area of small animal care, veterinary skills, and pet store management.

CDE Outline:

The CDE will follow the following guidelines

- Section I Written Test 250 points
- Section II Identification 250 points
- Section III Practicums 180 points

CDE breeds & species

- Dogs
- Cats
- Birds
- Fish
- Rabbits
- Other Animals

Description of student involvement:

- Four students per team will be allowed to compete in the CDE
- Each member of the team will complete the contest individually
- The top three scores on the team will constitute a team score
- Students will be allowed the following time limits for the contest
- Official Dress or appropriate FFA attire is required. Refer to Rule 1-A-5 on page 1.1.
- Tiebreakers: If team or individual scores are tied when scores are tabulated, ties will be broken in the following order: Total Identification score, then written exam score, then practicum score designated by officials, and finally total practicum score.

CDE Time limit

- Written Exam 50 minutes
- Breed Identification 50 minutes
- Practicums 50 minutes

CDE Details

- Section 1 Written Test 250 Points
 - 50 multiple-choice questions @ 5 pts. each
 - Listed below are the topics and the percentage of the test allocated to each topic:

TOPIC	%	#
✓ Anatomy, Physiology & Veterinary Terminology	24	12
✓ Nutrition and Feeding	24	12
✓ Health Care; prevention, causes, symptoms & treatment	24	12
✓ Reproduction, breeding, genetics, breeds and selection	14	7
✓ Safety, handling & sanitation; equipment/facilities	14	7

- **Section 2 Identification 250 Points**

- Identification of 50 breeds and species @ 5 pts each (Tables #1-#6)
- Photos, paintings, or live specimens may be used as samples
- The number of samples from each category will be:
 - ✓ Dogs 20 Table 1; Dogs
 - ✓ Cats 8 Table 2; Cats
 - ✓ Fish 6 Table 3; Fish
 - ✓ Birds 4 Table 4; Birds
 - ✓ Rabbits 5 Table 5; Rabbits
 - ✓ Other Animals 7 Table 6: Other animals

- **Section 3 Practicums 180 points**

- There will be three practicums @ 60 points each.
- Description of practicums
 - ✓ Practicum #1: Anatomy – Contestants will identify parts and/or answer questions relating to the topics as listed in the chart below for the current year’s event.
 - Refer to Table 7 for list of anatomy terminology
 - ✓ Practicum #2: Vet Science Problem Solving - Contestants will solve problems relating to the topics as listed in the chart below for the current year’s event.
 - Refer to Table 8 for list of possible topics
 - ✓ Practicum #3: Small animal problem solving – Contestants will solve problems relating to the topics as listed in the chart below for the current year’s event.

- Refer to Table 9 for list of possible topics

Year	Practicum #1 Anatomy	Practicum #2 Vet Science problem solving	Practicum #3 Small animal problem solving
Odd years: 2019, 2021	Digestive, circulatory, respiratory & external anatomy (Table 7A)	Parasite Identification, diagnosis and treatment. (Table 8A)	Evaluations: procedures & practices Interpretation and selection scenarios (Table 9A)
Even years: 2020, 2022	Skeletal, reproductive and external anatomy (Table 7B)	Tools and equipment (identification, use questions) (Table 8B)	Math Application: Business/personal and patient (Table 9B)

Information

Table 1: Dogs

Table 2: Cats

Table 3: Tropical Fish

Table 4: Birds

Table 5: Rabbits

Table 6: Other animals

Table 7: Practicum 1; Anatomy

7A – Digestive, circulatory, respiratory and external anatomy

7B – Skeletal, reproduction and external anatomy

Table 8: Practicum 2; Vet Science Problem Solving

8A – Parasites

8B - Tools and equipment

Table 9: Practicum 3; Small Animal Problem Solving

9A – Evaluations: procedures and practices; Interpretation and selection scenarios

9B – Math applications; Business & Personal; Patient

References

Small Animal Care and Management: Dean Warren - Cengage

Introduction to Veterinary Science: Lawhead and Baker - Cengage

An Illustrated Guide to Veterinary Medical Terminology: Janet Amundson Romich - Cengage

Introduction to Livestock & Companion Animals: Lee, Hutter & Rudd – Pearson

www.AKC.org

www.CFA.org

www.ARBA.net

TABLE 1 DOGS (40)

101 Australian Shepherd	115 Doberman Pincher (& Mini)	128 Poodle
102 Basset Hound	116 English Springer Spaniel	129 Pug
103 Beagle	117 French Bulldog	130 Rhodesian Ridgeback
104 Bernese Mountain Dog	118 German Shepherd	131 Rottweiler
105 Border Collie	119 German Shorthaired Pointer	132 Schnauzer (Mini)
106 Boston Terrier	120 Golden Retriever	133 Shetland Sheepdog
107 Boxer	121 Great Dane	134 Shih Tzu
108 Brittany Spaniel	122 Havanese	135 Siberian Husky
109 Bulldog	123 Labrador Retriever	136 Vizsla
110 Cavalier King Charles Spaniel	124 Maltese	137 Weimaraner
111 Chihuahua	125 Mastiff	138 Welsh Corgi
112 Cocker Spaniel	126 Newfoundland	139 West Highland White Terrier
113 Collie	127 Pomeranian	140 Yorkshire Terrier
114 Dachshund		

TABLE 2 CATS (20)

201 Abyssinian	208 Maine Coon Cat	215 Russian Blue
202 American Shorthair	209 Manx	216 Scottish Fold
203 Birman	210 Norwegian Forest Cat	217 Siamese
204 British Shorthair	211 Oriental Shorthair	218 Siberian
205 Burmese	212 Persian	219 Sphynx
206 Egyptian Mau	213 Ragdoll	220 Tonkinese
207 Exotic	214 Rex (Cornish & Devon)	

TABLE 3 TROPICAL FISH (18)

301 Angelfish	307 Chinese Algae Eater	313 Neon Tetra
302 Bala Shark	308 Comet Goldfish	314 Platy
303 Betta	309 Corydora Catfish	315 Plecostomus
304 Black Skirt Tetra	310 Guppy	316 Swordtail
305 Blue Gourami	311 Harlequin Rasbora	317 Zebra Cichlid
306 Cherry Barb	312 Molly	318 Zebra Danio

TABLE 4 BIRDS (10)

401 African Gray Parrot	405 Cockatiel	408 Scarlet Macaw
402 Amazon Parrot	406 Greater Sulfur Cockatoo	409 Sun Conure
403 Budgerigar	407 Peach Faced Lovebird	410 Zebra Finch
404 Canary		

TABLE 5 RABBITS (12)

501 Californian	505 Flemish Giant	509 Netherland Dwarf
502 Dwarf Hotot	506 Havana	510 New Zealand
503 Dutch	507 Jersey Woolly	511 Polish
504 English Lop	508 Mini Lop	512 Rex (Mini or Standard)

TABLE 6 OTHER ANIMALS (20)

601 Ball Python	608 Fire-bellied toad	615 Rat
602 Bearded dragon	609 Ferret	616 Red Foot Tortoise
603 Blue-Tongued Skink	610 Gerbil	617 Red-Eared Slider
604 Chinchilla	611 Guinea pig	618 Russian Tortoise
605 Corn Snake	612 Hamster	619 Sugar Glider
606 Crested Gecko	613 Hedgehog	620 White's tree frog
607 Degus	614 Pac Man Frog	

Table 7A; Practicum #1 Anatomy**Word Bank**

ODD YEARS; 2019, 2021, 2023

Mammal digestive

101 Anus	107 Kidney	112 Small intestine
102 Bladder	108 Liver	113 Spleen
103 Cecum	109 Mouth	114 Stomach
104 Colon	110 Pancreas	115 Ureter
105 Esophagus	111 Rectum	116 Urethra
106 Gall Bladder		

Avian digestive

201 Ceca	206 Gall bladder	211 Proventriculus
202 Cloaca	207 Large intestine	212 Small Intestine
203 Crop	208 Liver	213 Vent
204 Duodenum loop	209 Mouth/beak	214 Ventriculus
205 Esophagus	210 Pancreas	

Mammal Circulatory

301 Aortic arch	306 Left Ventricle	310 Right atrium
302 Aortic valve	307 Pulmonary artery	311 Right ventricle
303 Caudal vena cava	308 Pulmonary Valve	312 Septum
304 Cranial vena cava	309 Pulmonary veins	313 Ventricular wall
305 Left Atrium		

Mammal Respiratory

401 Alveoli	407 Larynx	413 Pleural cavity
402 Bronchi	408 Lungs	414 Pleural membranes
403 Bronchioles	409 Nasal cavity	415 Rings of cartilage
404 Diaphragm	410 Nasal pharynx	416 Soft palate
405 Epiglottis	411 Nose	417 Trachea
406 Hard palate	412 Oral Cavity	

External Anatomy

501 Brisket	507 Flank	512 Occiput
502 Crest	508 Flew	513 Pastern
503 Croup	509 Hock	514 Shoulder
504 Dew claw	510 Loin	515 Stifle
505 Dewlap	511 Muzzle	516 Withers
506 Elbow		

Table 7B; Practicum #1 Anatomy**Word Bank**

EVEN YEARS; 2020, 2022, 2024

Mammal Skeletal

101 Carpus	109 Lumbar vertebrae	117 Sacral vertebrae
102 Caudal vertebrae	110 Mandible	118 Scapula
103 Cervical vertebrae	111 Metacarpus	119 Sternum
104 Clavicle	112 Patella	120 Tarsus
105 Cranium	113 Pelvis	121 Thoracic vertebrae
106 Femur	114 Phalanges	122 Tibia
107 Fibula	115 Radius	123 Ulna
108 Humerus	116 Rib	

Avian Skeletal

201 Carpal	209 Keel	216 Pygostyle
202 Cervical vertebrae	210 Mandible	217 Radius
203 Coracoid	211 Maxilla	218 Ribs
204 Cranium	212 Metacarpal	219 Scapula
205 Femur	213 Orbit	220 Tarsometatarsal
206 Fibula	214 Pelvic girdle	221 Tibia
207 Furcula	215 Phalanges	222 Ulna
208 Humerus		

Mammal reproduction

301 Bulbourethral gland	307 Penis	313 Testes
302 Cervix	308 Prepuce/Sheath	314 Uterine body
303 Epididymis	309 Prostate gland	315 Uterine horn
304 Infundibulum	310 Retractor muscle	316 Vagina
305 Ovary	311 Scrotal sac	317 Vas Deferens
306 Oviduct	312 Seminal vesicle	318 Vulva

Avian reproduction

401 Cloaca	405 Ovary	408 Uterus
402 Infundibulum	406 Oviduct	409 Vagina
403 Isthmus	407 Testes	410 Vas deferens
404 Magnum		

External Anatomy

501 Cephalic vein	503 Jugular vein	504 Saphenous vein
502 Femoral vein		

Table 8A; Practicum #2, Vet Science Problem Solving

Word Bank

ODD YEARS; 2019, 2021, 2023

Parasites

101 American Dog Tick	109 Flukes	117 Pinworm
102 Anchor worm	110 Heartworm	118 Ringworm
103 Cat Warble	111 Hookworm	119 Roundworm
104 Deer Tick	112 Hookworm egg	120 Roundworm egg
105 Demodectic mite	113 Giardia	121 Sarcoptic mite
106 Ear mite	114 Lice	122 Tapeworm
107 Flea tapeworm egg	115 Lungworm	123 Whipworm
108 Fleas	116 Mosquito	124 Whipworm egg

EXAMPLES: Parasite Identification, diagnosis & treatment**Identification and/or questions from table 8A**

- _____ Which of the following parasites is considered an endoparasite?
- A. fleas
 - B. ticks
 - C. hookworm
 - D. mites
- _____ How different types of tapeworm are known to infect dogs?
- A. 1
 - B. 2
 - C. 3
 - D. 4
- _____ What external parasite transmits Lyme disease?
- A. Fleas
 - B. Flies
 - C. Mosquitoes
 - D. Ticks
- _____ A whipworm egg under a microscope looks _____ in shape
- A. circle
 - B. oval
 - C. cone
 - D. stringy

Table 8B; Practicum #2, Vet Science Problem Solving

Word Bank

EVEN YEARS; 2020, 2022, 2024

Tools and Equipment

101 Ambu Bag	113 Comb - Scotch	124 Muzzle — nylon
102 Animal Clippers	114 Elizabethan collar	125 Nail clippers - guillotine
103 Brush - Pin	115 Endoscope	126 Nail clippers - plier
104 Brush - Slicker	116 Endotracheal tubes	127 Ophthalmoscope
105 Carmalt Hemostat	117 Fecal loop	128 Olsen-Hegar Needle Holder
106 Cat bag	118 Fecal Flotation Test	129 Otoscope
107 Catch pole (dog snare)	119 Feeding tube for small animals	130 Shedding blade
108 Centrifuge	120 Laparoscopy	131 Snook ovariohysterectomy hook
109 Chemical indicator strips	121 Laryngoscopes	132 Stethoscope
110 Clipper blades	122 Metzenabum Dissecting Scissor	133 Syringe - luer lock
111 Clipper comb	123 Muzzle — basket	134 Syringe - slip tip
112 Comb - Flea		

EXAMPLES: Tools and Equipment**Identification and/or questions from table 8B**

- _____ Most surgical instruments are manufactured from ____.
- A. aluminum
 - B. copper
 - C. stainless steel
 - D. lead
- _____ A machine that spins sample very rapidly to separate elements based on weight is a ____.
- A. counter balance
 - B. centrifuge
 - C. fecalizer
 - D. luer lock syringe
- _____ During a recent exam the vet examined your cats ears. What instrument was most likely used?
- A. Endoscope
 - B. Laparoscope
 - C. Laryngoscope
 - D. Otoscope
- _____ A snook hook is typically used during a ____.
- A. castration
 - B. hernia repair
 - C. spaying
 - D. declawing

Table 9A; Practicum #3, Small Animal Problem Solving

Word Bank

ODD YEARS; 2019, 2021, 2023

Evaluations: procedures and practices

Anatomical directions
Aseptic
Biosecurity & Biohazards
CRT (capillary refill time)
Disinfectant

Injections (SQ, IM, IV)
Orchiectomy
Ovariohysterectomy
OSHA principles
Patient restraints

Physical exam
PPE (personal protective equipment)
Rectal temp procedure
Sterilize
TPR (temperature, pulse, respiration)

Interpretation and selection scenarios

Animal requirements
Breed requirements
Antibiotics
Clipper blade size
Drug delivery systems (injection type, oral, nebulized, etc)

Equipment, supplies, and housing
Labels (pet food, health products)
Manuals and diagrams
MSDS information

Needle gauge size
Physical exam data
Schedules (drugs, vaccinations, kennels, etc)
Vaccines

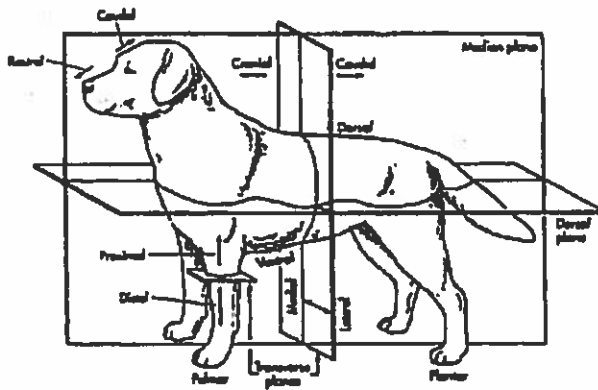
EXAMPLES: Management Application

Questions from information topics from table 9A

_____ The capillary refill time (CRT) for a dog is 1 second. The dog would be considered _____

- A. abnormally low
- B. Normal
- C. Abnormally high
- D. Not an issue

_____ Looking at the picture below identify the?



_____ Which of the following needle bores is the smallest

- A. 14 gauge
- B. 16 gauge
- C. 20 gauge
- D. 24 gauge

_____ Which of the following answers best completes the statement: Temperature pulse and respiration rates tend to _____ as the size of the animal _____

- A. Increase, decrease
- B. decrease, decrease
- C. remain constant, increases
- D. remain constant, decreases

_____ You have been asked to clean the reception room. What best describes, "cleaning"?

- A. destroying most microorganisms on non-living objects by physical or chemical means.
- B. destroying all microorganisms on non-living objects by heat or chemical means.
- C. destroying all microorganisms and viruses on living and non-living objects
- D. physically removing all visible signs of organic matter such as feces, hair, dirt, etc.

_____ When working in a clinic or pet store, you understand the guidelines set forth by OSHA are based on the principle of _____

- A. Employee Right to Know
- B. Employee Basic Knowledge
- C. Employee Determination of Hazards
- D. Employee Protection Act

_____ The letters PPE in the work place refer to _____.

- A. People Pets and the Environment
- B. Personal Protective Equipment
- C. Proper Protocol for Everyone
- D. Personal Property Entitlement

Table 9B; Practicum #3, Small Animal Problem Solving

Word Bank

EVEN YEARS; 2020, 2022, 2024

Business & Personal

Discounts	FICA	Kennel problems	Profit/Net Income
Equipment purchases	Income/Sales	Margins & price-setting	Supply orders
Expenses/Costs	Interest		

Patient

Aquarium weight	Dosages	Feed costs	Medications
Conversions	Equipment costs	Health costs	Solutions
Dilutions			

Dosages abbreviation information

I.M. Intramuscular	S.I.D. Once a day	S.O. Left eye
I.V. Intravenous	B.I.D. Twice daily	D.O. Right eye
S.Q. Subcutaneous	T.I.D. Three times a day	S.A. Left ear
p.c. After meals	Q.I.D. Four time a day	D.A. Right ear
a.c. Before meals	O.D. Every day	U.A. Both ears or each ear
p.o. Orally	Q.O.D. Every other day	U.O. Both eyes or each eye
p.r. Per rectum	ss One half	cap Capsule
top Topical	D.O.B. Date of birth	gtt A drop
		tab Tablet

EXAMPLES: Dosages Application

Even years; applied math-business applications, dosages and conversions from table 9B

_____ Indicate the number of tablets/capsules prescription for the following order: Rx: Metronidazole tablets 250 mg, 1 tablet, P.O., BID x 10 days

- A. 10
- B. 20
- C. 30
- D. 40

_____ You are advised to give your Golden Retriever 500 mg of amoxicillin SID and the vet gives you 250 mg tablets. How many tablets will you administer in one day?

- A. 1
- B. 2
- C. 4
- D. 6

_____ 1000 mg of a solution is equal to _____ g.

- A. 1
- B. 10
- C. 100
- D. 10,000

_____ A customer ask how much they should feed their 5 pound Chihuahua. The new dog food label says to feed 1 cup of dog food for every 4 kilograms of weight. Approximately how much should they feed?

- A. 1/2 cup
- B. 3/4 cup
- C. 1 cup
- D. 2 cups

- _____ You take the pulse rate of a cat and get 10 beats in 5 seconds, What is the heart rate in bpm?
A. 50
B. 120
C. 240
D. 300
- _____ As a grooming assistant you are making \$9.00 an hour. You receive a raise of 15%. How much are you now making per hour?
A. \$9.15
B. \$9.95
C. \$10.15
D. \$10.35
- _____ Your store is having a BOGO sale on cat food. Buy one and get 50% off the second. Sales tax is 5%. What would the total bill be for 4 cans of Pretty Kitty if one can cost \$.70
A. \$2.10
B. \$2.21
C. \$2.80
D. \$2.94
- _____ The goal of your pet supply business is for a 40% profit margin. What would you have to sell a bottle of shampoo for if your cost is \$2.60
A. \$2.64
B. \$3.00
C. \$3.64
D. \$4.00