2012 ND State FFA Convention
Small Animal Care CDE Written Test

Instructions: Read each of the following questions carefully and darken the oval of the letter you choose on the SCANTRON sheets provided. MAKE CERTAIN THAT YOU ARE USING A No. 2 LEAD PENCIL! If you do not have one, see one of the advisors running this event.

Breeding and Genetics: 10 Questions

1. In dogs, the average length of pregnancy is:
   A. 45 days     C. 63 days
   B. 54 days     D. 92 days

2. Another name for pregnancy is:
   A. Gestation    C. Nurturing
   B. Lactation    D. Parturition

3. A written record of an animal’s ancestry is?
   A. Breeding Chart C. Registration
   B. Family Tree    D. Pedigree

4. Cats have ___________ pairs of chromosomes.
   A. 17           C. 19
   B. 18           D. 20

5. Configuration of the genes in an individual is the ________ of the individual.
   A. Phenotype     C. Heterotype
   B. Genotype      D. Homotype

6. ________ is the nutrient needed to grow new tissue and repair old tissue.
   A. Protein       C. Sulfur
   B. Vitamin D     D. Calcium

7. Zebra Finch reach sexual maturity at the age of?
   A. 3 months  C. 6 months
   B. 9 months  D. 12 months

8. The hormone that promotes pregnancy is called?
   A. Estrogen     C. Progesterone
   B. Testosterone D. Pregantersone

9. Average gestation of a rabbit is:
   A. 28-30 days  C. 30-32 days
   B. 32-34 days  D. 34-36 days
10. Mating one male to more than one female is called _______ mating.
   A. Crossbred   C. Harem
   B. Quorum   D. Hybrid

**Nutrition: 10 Questions**

11. Energy is primarily provided from?
   A. Vitamins   C. Carbohydrates
   B. Minerals   D. All of the above

12. The small intestine is divided into three sections, which is the correct order food travels through them?
   A. Ileum-Jejunum-Duodenum   C. Duodenum-Ileum-Jejunum
   B. Jejunum-Ileum-Duodenum   D. Duodenum-Jejunum-Ileum

13. What is the function of water in an animal's body?
   A. Biochemical reactions   C. Helps give the body form
   B. Maintain body temperature   D. All of the above

14. Which of the following is classified as a macro mineral?
   A. Chlorine   C. Cooper
   B. Cobalt   D. Iodine

15. Which of the following plants is safe for pets to eat?
   A. Dracaena   C. English Ivy
   B. Elephant Ear   D. None of the above

16. The following supplement provides the most useable calcium in a dog's diet:
   A. Cod Liver Oil   C. Milk
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17. Vitamin A and D are needed in turtles to prevent all of the following except:
   A. Malocclusion   C. Pneumonia
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18. Cats have a high requirement for?
   A. Protein   C. Calcium
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19. According to the N.R.C., the average dog should have a diet that consists of ___% fat?
   A. 15%   C. 19%
   B. 23%   D. 30%

20. The taking in of feed and water is called?
   A. Deguision   C. Digestion
   B. Mastication   D. Prehension
Breeds and Grooming: 5 questions
21. The Great Dane is a member of which groups of dogs?
   A. Herding
   B. Working
   C. Sporting
   D. Toy

22. Which of the following are nocturnal animals?
   A. Cats
   B. Hamsters
   C. Dogs
   D. Parakeets

23. Which of the following is considered a shorthaired cat breed?
   A. Birman
   B. Balinese
   C. Burmese
   D. Somali

24. Terrestrial adult is a stage in a life cycle of a?
   A. Lizard
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   C. Turtle
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25. Which breed of rabbit was originally developed in Holland?
   A. Mini Lop
   B. Netherland Dwarf
   C. Mini Rex
   D. None of the above

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26. Normal temperature of the cat is_______ degrees Fahrenheit.
   A. 99.5
   B. 102.5
   C. 101.5
   D. 103.5

27. Where does oxygen exchange in the gills of a fish?
   A. Alveoli
   B. Lamella
   C. Air sacs
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28. One function of the gizzard in birds is to grind food with?
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   A. 96.6
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   D. 101
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   B. Rabbit                     D. Fish

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   A. Cartilage                 C. Filaments
   B. Ligaments                 D. Tendons

33. Which is not one of the four basic tissues?
   A. Bone                       C. Epithelium
   B. Muscle                    D. Nerve

34. What is the term used for the ability of an animal’s tail to grasp or wrap around objects?
   A. Preferential              C. Prehensile
   B. Preen                    D. None of the above

35. The top layer of skin is called the?
   A. Epidermis                  C. Dermis
   B. Sebaceous                 D. Subcutaneous

**Diseases and Parasites: 10 Questions**

36. The chemical which is found on flea collars is called a(n):
   A. Rodenticide              C. Fungicide
   B. Herbicide                D. Insecticide

37. Which parasite is common to most species?
   A. Heartworm               C. Lung Worm
   B. Roundworm               D. Tapeworm

38. Mange is a disease caused by?
   A. Mites                    C. Ticks
   B. Mosquitoes              D. Lice

39. If there is a bacterial infection under the skin a (n) ____ is likely to develop?
   A. Abscess                 C. Adystocia
   B. Colic                  D. Dementia

40. Ringworm is classified as a(n):
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   B. Internal parasite       D. External parasite
41. Mosquitoes can transfer microfilaria to cause a disease in cats called?
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   B. Virus       D. Weepy Eye

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   A. Goiter      C. Ulcer
   B. Pasteurellosis D. Infectious canine hepatitis

Housing and Management: 5 Questions

46. Most fish are:
   A. Egg buriers             C. Egg depositors
   B. Egg scatters            D. None of the above

47. Process of examining a dead animal is known as?
   A. Autopsy             C. Culture sensitivity
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2012 State Small Animal Care  
Team Problem

Team Name_________________________  

Instructions: Work together with your teammates to complete the following table. Use the information of the three different types of dog food that has been provided. Round all dollar values to nearest cents, and others to nearest hundredth. Use the high end of recommended feeding levels. Situation: Johnny FFA is deciding which dog food to use for Hawk, his prized Golden Retriever. Hawk is an active dog that weighs 75 pounds and is used for waterfowl hunting.

<table>
<thead>
<tr>
<th></th>
<th>Science Diet</th>
<th>Purina</th>
<th>Pedigree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein% 1 pt. each(3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Fat% 1 pt. each(3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Fiber% 1 pt (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per Pound 3 pts each (9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily amount of feed needed to meet daily requirements. The answer in cups 3 pts. each (9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per Day 5 pts. each (15)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per Month 2 pts. (6)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which dog food do you recommend for Hawk? Why? (2)__________________________________

Notes: 1 Standard Cup= 8 ounces  
8 Fluid ounces measuring Cup contains 4 ounces by weight  
1 month=30 days
**Team Name:** Key  

**Instructions:** Work together with your teammates to complete the following table. Use the information of the three different types of dog food that has been provided. Round all dollar values to nearest cents, and others to nearest hundredth. Use the high end of recommended feeding levels. **Situation:** Johnny FFA is deciding which dog food to use for Hawk, his prized Golden Retriever. Hawk is an active dog that weighs 75 pounds and is used for waterfowl hunting.

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<tbody>
<tr>
<td>Protein% 1 pt. each(3)</td>
<td>24.8%</td>
<td>25.0%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Max. Fat% 1 pt. each(3)</td>
<td>16.1%</td>
<td>9.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Crude Fiber% 1 pt. (3)</td>
<td>2.2%</td>
<td>5.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Cost per Pound 3 pts each (9)</td>
<td>$1.67</td>
<td>$0.88</td>
<td>$0.61</td>
</tr>
<tr>
<td>Daily amount of feed needed to meet daily requirements. The answer in cups 3 pts. each (9)</td>
<td>5 ¼ cups or 5.25 cups</td>
<td>4 ¼ cups or 4.25 cups</td>
<td>4 ½ cups or 4.5 cups</td>
</tr>
<tr>
<td>Cost per Day 5 pts. each (15)</td>
<td>$2.10-$2.19</td>
<td>$0.85-$0.94</td>
<td>$0.69-$0.72</td>
</tr>
<tr>
<td>Cost per Month 2 pts. (6)</td>
<td>$63.00-65.70</td>
<td>$25.50-$28.20</td>
<td>$20.70-21.60</td>
</tr>
</tbody>
</table>

**Which dog food do you recommend for Hawk? Why?**

(2)__________________________________

**Notes:**
1. Standard Cup= 8 ounces
2. 8 Fluid ounces measuring Cup contains 4 ounces by weight
3. 1 month=30 days
**Product Information**

<table>
<thead>
<tr>
<th>Guaranteed Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Protein (Min) 25.0%</td>
</tr>
<tr>
<td>Crude Fat (Min) 7.0%</td>
</tr>
<tr>
<td>Crude Fat (Max) 9.0%</td>
</tr>
<tr>
<td>Crude Fiber (Max) 5.0%</td>
</tr>
<tr>
<td>Moisture (Max) 12.0%</td>
</tr>
<tr>
<td>Vitamin A (Min) 10,000 IU/kg</td>
</tr>
</tbody>
</table>

**Ingredients**

Whole grain corn, meat and bone meal, whole grain wheat, soybean meal, corn gluten meal, corn germ meal, soybean germ meal, chicken, egg and chicken flavor, animal digest, animal fat preserved with mixed-tocopherols (form of Vitamin E), turkey by-product meal, salt, calcium carbonate, potassium chloride, L-Lysine monohydrochloride, added color (Red 40, Yellow 5, Blue 2), choline chloride, zinc sulfate, Vitamin E supplement, ferrous sulfate, manganese sulfate, niacin, Vitamin A supplement, copper sulfate, calcium pantothenate, garlic oil, pyridoxine hydrochloride, Vitamin B-12 supplement, thiamine mononitrate, Vitamin D-3 supplement, riboflavin supplement, calcium iodate, menadione sodium bisulfite complex (source of Vitamin K activity), folic acid, biotin, sodium selenite.

G-4490

**How Much To Feed**

**Recommended Daily Feeding Amount using a standard 8-oz. measuring cup**

Purina® Fit & Trim® brand Adult Dog Food

<table>
<thead>
<tr>
<th>Dog's Current Weight</th>
<th>Feeding Amount*</th>
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</tr>
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<tbody>
<tr>
<td>3 to 12 lbs.</td>
<td>1/3 to 1 cup</td>
<td>1/2 to 1-1/4 cups</td>
</tr>
<tr>
<td>13 to 20 lbs.</td>
<td>1 to 1-1/3 cups</td>
<td>1-1/4 to 1-3/4 cups</td>
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<tr>
<td>21 to 35 lbs.</td>
<td>1-1/3 to 2 cups</td>
<td>1-3/4 to 2-1/2 cups</td>
</tr>
<tr>
<td>36 to 50 lbs.</td>
<td>2 to 2-1/2 cups</td>
<td>2-1/2 to 3-1/4 cups</td>
</tr>
<tr>
<td>51 to 75 lbs.</td>
<td>2-1/2 to 3-1/4 cups</td>
<td>3-1/4 to 4-1/4 cups</td>
</tr>
<tr>
<td>76 to 100 lbs.</td>
<td>3-1/4 to 4 cups</td>
<td>4-1/4 to 5 cups</td>
</tr>
<tr>
<td>Over 100 lbs.</td>
<td>4 cups plus 1/3 cup for each 10 lbs. of body weight over 100 lbs.</td>
<td>5 cups plus 1/2 cup for each 10 lbs. of body weight over 100 lbs.</td>
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PEDIGREE- Adult Complete Nutrition for Dogs

Bag Size: 36 pound
Cost-$21.99

GROUND WHOLE CORN, MEAT AND BONE MEAL, CORN GLUTEN MEAL, ANIMAL FAT (PRESERVED WITH BHA/CITRIC ACID), SOYBEAN MEAL, GROUND WHOLE WHEAT, BREWERS RICE, DRIED PLAIN BEET PULP, NATURAL FLAVOR, SALT, VEGETABLE OIL ([SOURCE OF LINOLEIC ACID] PRESERVED WITH BHA/BHT), POTASSIUM CHLORIDE, VITAMINS (CHOLINE CHLORIDE, a-TOCOPHEROL ACETATE [SOURCE OF VITAMIN E], NIACIN, BIOTIN, d-CALCIUM PANTOTHENATE, RIBOFLAVIN SUPPLEMENT [VITAMIN B2], PYRIDOXINE HYDROCHLORIDE, VITAMIN A SUPPLEMENT, VITAMIN B12 SUPPLEMENT, THIAMINE MONONITRATE [VITAMIN B1], VITAMIN D3 SUPPLEMENT) MINERALS (ZINC SULFATE, ZINC PROTEINATE, COPPER SULFATE, POTASSIUM IODIDE, COPPER PROTEINATE, MANGANESE PROTEINATE), ADDED FD&C COLORS (RED 40, YELLOW 5, BLUE 2).

335 calories per serving (8 oz measuring cup).

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Crude Protein</td>
<td>Min 21.0%</td>
</tr>
<tr>
<td>Crude Fat</td>
<td>Min 10.0%</td>
</tr>
<tr>
<td>Crude Fiber</td>
<td>Max 4.0%</td>
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<tr>
<td>Moisture</td>
<td>Max 12.0%</td>
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<tr>
<td>Linoleic Acid (omega 6 Fatty Acid)</td>
<td>Min 3%</td>
</tr>
<tr>
<td>Copper</td>
<td>Min 10 mg/kg</td>
</tr>
<tr>
<td>Zinc</td>
<td>Min 200 mg/kg</td>
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<tr>
<td>Vitamin E</td>
<td>Min 300 IU/kg</td>
</tr>
<tr>
<td>Ascorbic Acid (Vit. C*)</td>
<td>Min 70 Mg/kg</td>
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Recommended daily feeding guide for adult dogs*

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<td>Up to 10 lbs.</td>
<td>1/4 to 1</td>
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<td>10 to 25 lbs.</td>
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<td>25 to 50 lbs.</td>
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<td>50 to 75 lbs.</td>
<td>3 1/2 to 4 1/2</td>
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<td>75 to 150 lbs.</td>
<td>4 1/2 to 8</td>
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1 cup = 8 oz. measuring cup
1 can = 13.2 oz, 1 pouch = 5.3 oz.
Science Diet- Ideal Balance Adult Chicken & Brown Rice

Bag Size: 30 pound    Cost-$49.99

Ingredients

Chicken, Brown Rice, Whole Grain Wheat, Cracked Pearled Barley, Soybean Meal, Chicken Meal, Pork Fat (preserved with mixed tocopherols and citric acid), Dried Egg Product, Natural Flavor, Whole Grain Oats, Apples, Lactic Acid, Soybean Oil, Cranberries, Peas, Carrots, Dried Beet Pulp, Iodized Salt, Flaxseed, Broccoli, vitamins (L-Ascorbyl-2-Polyphosphate (source of vitamin C), Vitamin E Supplement, Niacin, Thiamine Mononitrate, Vitamin A Supplement, Calcium Pantothenate, Biotin, Vitamin B12 Supplement, Pyridoxine Hydrochloride, Riboflavin, Folic Acid, Vitamin D3 Supplement), Calcium Carbonate, Vitamin E Supplement, Choline Chloride, minerals (Ferrous Sulfate, Zinc Oxide, Copper Sulfate, Manganese Oxide, Calcium Iodate, Sodium Selenite), Taurine, preserved with Mixed Tocopherols and Citric Acid, Phosphoric Acid, Beta-Carotene, Rosemary Extract

NUTRITION

Dry 3682 kcal/kg (377 kcal/per cup²)

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Dry Matter¹ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein</td>
<td>24.8</td>
</tr>
<tr>
<td>Fat</td>
<td>16.1</td>
</tr>
<tr>
<td>Carbohydrate (NFE)</td>
<td>51.3</td>
</tr>
<tr>
<td>Crude Fiber</td>
<td>2.2</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.88</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>0.72</td>
</tr>
<tr>
<td>Sodium</td>
<td>0.39</td>
</tr>
<tr>
<td>Potassium</td>
<td>0.74</td>
</tr>
<tr>
<td>Magnesium</td>
<td>0.161</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>258 mg/kg</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>701 IU/kg</td>
</tr>
<tr>
<td>Omega-3 Fatty Acids Total</td>
<td>0.51</td>
</tr>
<tr>
<td>Omega-6 Fatty Acids Total</td>
<td>3.73</td>
</tr>
</tbody>
</table>

Feeding Guide

Adult maintenance

<table>
<thead>
<tr>
<th>Weight of Dog</th>
<th>Amount per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 lb (2.3 kg)</td>
<td>1/2 cup (50 g) - 5/8 cup (65 g)</td>
</tr>
<tr>
<td>10 lb (4.5 kg)</td>
<td>3/4 cup (75 g) - 1 1/8 cups (115 g)</td>
</tr>
<tr>
<td>20 lb (9.1 kg)</td>
<td>1 1/3 cups (135 g) - 1 3/4 cups (180 g)</td>
</tr>
<tr>
<td>40 lb (18 kg)</td>
<td>2 1/4 cups (230 g) - 3 cups (305 g)</td>
</tr>
<tr>
<td>60 lb (27 kg)</td>
<td>3 cups (305 g) - 4 1/4 cups (435 g)</td>
</tr>
<tr>
<td>80 lb (36 kg)</td>
<td>3 3/4 cups (385 g) - 5 1/4 cups (535 g)</td>
</tr>
<tr>
<td>100 lb (45 kg)</td>
<td>4 1/3 cups (440 g) - 6 cups (610 g)</td>
</tr>
</tbody>
</table>
2012 ND State FFA Convention
Small Animal Care CDE
Anatomy Diagram Practicum-50 Points

Instructions: Study the copied handouts provided of the turtle’s skeleton, reproductive system of a female bird, along with the skeleton of the bird. On the handouts you will see a number that corresponds to a structure you must name. The number of the structure will correspond to the list following these instructions. Simply place the letter of your choice for each structure on the Scantron sheet provided for this portion of the contest. Be certain to use a Number 2 lead pencil. If you must change your answer be sure to erase completely.

Structure Number 1:
   a. Digits
   b. Carpus
   c. Trachea
   d. Hyoid

Structure Number 2:
   a. Carpus
   b. Coracoid
   c. Lilium
   d. Sternum

Structure Number 3:
   a. Tibiotarsus
   b. Atlas
   c. Ulna
   d. Furcula

Structure Number 4:
   a. Pubis
   b. Llimum
   c. Radius
   d. Alula

Structure Number 5:
   a. Digits
   b. Pygostyle
   c. Hyoid
   d. Cardal Vertebrae

Structure Number 6:
   a. Cardal Vertebrae
   b. Pygostyle
   c. Rectum
   d. Ucinate process

Structure Number 7:
   a. Tibiotarsus
   b. Skull
   c. Cardal Vertebrae
   d. Hyoid

Structure Number 8:
   a. Alula
   b. Radius
   c. Digits
   d. Tarsometatarsus
<table>
<thead>
<tr>
<th>Structure Number</th>
<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Metacarpus</td>
<td>Sternum</td>
<td>Furcula</td>
<td>Carpus</td>
</tr>
<tr>
<td>10</td>
<td>Coracoid</td>
<td>Ulna</td>
<td>Femur</td>
<td>Pubis</td>
</tr>
<tr>
<td>11</td>
<td>Trachea</td>
<td>Ilium</td>
<td>Hyoid</td>
<td>Furcula</td>
</tr>
<tr>
<td>12</td>
<td>Pygostyle</td>
<td>Hyoid</td>
<td>Femur</td>
<td>Alula</td>
</tr>
<tr>
<td>13</td>
<td>Ear</td>
<td>Skull</td>
<td>Cardal Vertebrae</td>
<td>Hyoid</td>
</tr>
<tr>
<td>14</td>
<td>Cardal Vertebraa</td>
<td>Femur</td>
<td>Atlas</td>
<td>Digits</td>
</tr>
<tr>
<td>15</td>
<td>Carpus</td>
<td>Tibiotarsus</td>
<td>Tarsometatarus</td>
<td>Radius</td>
</tr>
<tr>
<td>16</td>
<td>Stigma</td>
<td>Furcula</td>
<td>Infundibulum</td>
<td>Ostium</td>
</tr>
<tr>
<td>17</td>
<td>Infundibulum</td>
<td>Cloaca</td>
<td>Uterus</td>
<td>Stalk of Ovary</td>
</tr>
<tr>
<td>18</td>
<td>Cloaca</td>
<td>Stigma</td>
<td>Vagina</td>
<td>Rudementary right oviduct</td>
</tr>
<tr>
<td>19</td>
<td>Small Ova</td>
<td>Mature Ovum</td>
<td>Ostium</td>
<td>Stalk of ovary</td>
</tr>
</tbody>
</table>
Structure Number 20:
   a. Stalk of ovary
   b. Infundibulum
   c. Pleurapophysis of seventh vertebra
   d. Cloaca

Structure Number 21:
   a. Backbone
   b. Tail Vertebrae
   c. Pelvic Bone
   d. Vertebral Plate

Structure Number 22:
   a. Upper Arm
   b. Upper Leg
   c. Lower Leg
   d. Lower Arm

Structure Number 23:
   a. Upper Arm
   b. Upper Leg
   c. Lower Leg
   d. Lower Arm

Structure Number 24:
   a. Vertebral Plate
   b. Shoulder Girdle
   c. Pygostyle
   d. Tarsometatarsus

Structure Number 25:
   a. Neck Vertebrae
   b. Shoulder Girdle
   c. Uncinate process
   d. Vertebral Plate
Identify the Skeletal Parts of a Bird.
Identify the parts of the Ovaries and Oviduct system of a female bird.
Identify the parts of a turtle’s skeleton.
2012 SAC Anatomy Key

1. A
2. A
3. C
4. B
5. B
6. A
7. A
8. D
9. B
10. A
11. A
12. B
13. B
14. C
15. D
16. C
17. C
18. A
19. B
20. A
21. C
22. B
23. A
24. B
25. D