UNIT THREE – QUESTION FOUR

Unit Three – Chapter 2 – Five Senses

1 What type of light is visible to cats but not to humans?
--Ultraviolet
Page 9 Column 1 Paragraph 1

2 What is the technical term for eyeshine?
--tapetum lucidum
Page 9 Column 1 Paragraph 2

3 How does eyeshine occur?
--A layer of iridescent cells at the back of the eyeball reflects the light
Page 9 Column 1 Paragraph 2

4 Name the parts of a cat's eye.
--Eyelids, nictitating membrane, cornea, sclera, pupil, iris, lens, retina, optic nerve
Page 9 Column 1 & 2 Paragraphs 3, 1 & 2

5 How does a cat "see"?
--Light rays pass through the lens to the retina where they are changed to nerve impulses which are transmitted to the brain by way of the optic nerve.
Page 9 Column 2 Paragraph 2

6 Which sense does a cat utilize most when hunting?
--hearing
Page 9 Column 2 Paragraph 3

7 Which parts of the cat's ears are located inside the skull?
--Eardrum, hammer, anvil, stirrup, cochlea, auditory nerve, semi-circular canals, Eustachian tube
Page 10 Column 1 Paragraphs 2 & 3

8 Which two parts of the cat's ear are not involved in hearing?
--Semi-circular canals and Eustachian tube
Page 10 Column 1 Paragraph 2

9 Which part of the cat's ear is utilized in maintaining balance?
--Semi-circular canals
Page 10 Column 1 Paragraph 2

10 Where is the cat's auditory nerve located?
--Cochlea
Page 10 Column 1 Paragraph 2

11 What are the olfactory nerves?
--They are concerned with the sense of smell
Page 10 Column 1 Paragraph 4

12 How does catnip affect most cats?
--Some are quietly excited
--Some roll, purr and growl in ecstasy
--A few become disagreeable
Page 10 Column 2 Paragraph 1

13 Where are papillae located?
--Upper surface of the tongue
Page 10 Column 2 Paragraph 2

14 What is the purpose of papillae?
--Enable cat to scrape every piece of meat off a bone
--Enable cat to lick its coat clean
Page 10 Column 2 Paragraph 2

15 Where are the tastebuds located?
--On the tongue, at the tip and at the back of the throat
Page 10 Column 2 Paragraph 2

16 What are the sensations that taste buds react to?
--Acidity, sweetness, bitterness, saltiness
Page 10 Column 2 Paragraph 2

1 Which joints are ball and socket?
--Hip and shoulder
Page 12 Column 2 Paragraph 4

2 Name the major joints of the foreleg.
--Shoulder, elbow and carpus (wrist)
Page 12 Column 2 Paragraph 4

3 Name the major joints of the hind leg.
--Hip, stifle (knee), and hock (ankle)
Page 12 Column 2 Paragraph 4

4 What are the main functions of the skeleton?
--Framework for the muscular system
--Protection of the vital organs
--Locomotion
Page 12 Column 2 Paragraph 5

5 What are the most frequently broken bones?
--Foreleg, hind leg and pelvis
Page 13 Column 1 Paragraph 2

6 Name the three types of muscle.
--Striated, cardiac and smooth
Page 13 Column 1 Paragraph 3

7 Which muscle type is involved in voluntary movement
--Striated
Page 13 Column 1 Paragraph 3

8 How does striated muscle get its name?
--Under a microscope, one can see small stripes or striations on the muscle tissue
Page 13 Column 1 Paragraph 3

Is cardiac muscle smooth or striated?
--Striated
Page 13 Column 1 Paragraph 4

9 Where is smooth muscle found?
--In the organs (such as digestive tract, urinary tract, reproductive tract) as well as arteries, bronchioles and the eye
Page 13 Column 1 Paragraph 5

10 What is the difference between extending or flexing a joint?
--Extending makes the angle of the joint larger and flexing makes the angle smaller
Page 13 column 1 Paragraph

11 What do we call the top part of the body?
--Dorsal
Page 13 Column 2 Paragraph 1

12 What do we call the bottom part of the body?
--Ventral
Page 13 Column 2 Paragraph 1

13 What do we call the areas of attachment of the muscles?
--Origin (where the muscle begins) and insertion (where the muscle ends)
Page 13 Column 2 Paragraph 1

<u>Unit Three – Chapter Four – Respiratory and Circulatory Systems</u>

14 What is the primary function of the respiratory system?
--Transfers oxygen from air to the blood and removes carbon dioxide from the blood and carries it out of the body into the air
Page 16 Column 1 Paragraph 1

15 What parts of the body form the pharynx?
--nose and mouth
Page 16 Column 1 Paragraph 1

16 What does the mouth and nose form?
--Pharynx
Page 16 Column 1 Paragraph 1

17 What parts of the body does the trachea connect?
--Pharynx and lungs
Page 16 Column 1 Paragraph 1

1 What do we call the tube that connects the lungs and the pharynx?
--Trachea
Page 16 Column 1 Paragraph 1

2 What structure prevents food and water from entering the lungs
--Epiglottis
Page 16 Column 1 Paragraph 1

3 What does the epiglottis do?
--Prevents food and water from entering the lungs when swallowing
Page 16 Column 1 Paragraph 1

4 What do we call the tubes branching from the trachea?
--Bronchi or bronchial tubes
Page 16 Column 1 Paragraph 1

5 Bronchi are branches off what tube?
--Trachea
Page 16 Column 1 Paragraph 1

6 What do we call the branches off the bronchi?
--Bronchioles
Page 16 Column 1 Paragraph 1

7 What are bronchioles?
--Branches off the bronchi
Page 6 Column 1 Paragraph 1

8 What is found at the end of bronchioles?
--alveoli
Page 6 Column 1 Paragraph 1

9 What are alveoli?
--Dead end sacs at the end of bronchioles
Page 16 Column 1 Paragraph 1

10 Where does the exchange of oxygen and carbon dioxide take place?
--in the alveoli
Page 16 Column 1 Paragraph 1

11 What do we call the muscle that separates the lungs from the other organs?
--Diaphragm
Page 16 Column 1 Paragraph 2

12 Where is the diaphragm located?
--Between the lungs and the other organs
Page 16 Column 1 Paragraph 2

13 What is the function of the diaphragm?
--Produces inspiration (breathing in) then relaxes to allow exhalation (breathing out)
Page 16 Column 1 Paragraph 2

14 What happens if a diaphragm is torn (ruptured)?
--A hernia is created allowing abdominal organs into the chest, which may collapse the lungs creating a life threatening situation.
Page 16 Column 1 Paragraph 3

15 Name the parts of the respiratory system.
--nose and mouth (pharynx), trachea, epiglottis, lungs (bronchi, bronchioles, alveoli)
Page 16 Column 1 Paragraph 1

16 Name the parts of the respiratory system that are inside the lungs.
--Bronchi, bronchioles, alveoli
Page 16 Column 1 Paragraph

17 What other function does the respiratory system have in addition to breathing?
--Regulating body temperature
Page 16 Column 1 Paragraph 4

18 Name the parts of the circulatory system.
--Heart, blood, blood vessels, lymphatic system and spleen
Page 16 Column 1 Paragraph 5

19 What is the function of the circulatory system?
--Delivers oxygen and nutrients to the cells of the body and removes waste products
Page 16 Column 1 Paragraph 5

1 The heart has how many chambers?
--Four
Page 16 Column 2 Paragraph 1

2 What is the normal resting pulse of a cat?
--120 beats per minute
Page 16 Column 2 Paragraph 1

3 What creates the "lub dub" heart sounds?
--Closure of the heart valves
Page 16 Column 2 Paragraph 1

4 Name the three types of blood vessels.
--Arteries, veins and capillaries
Page 16 Column 2 Paragraph 2

5 Which vessels carry blood away from the heart?
--Arteries
Page 16 Column 2 Paragraph 2

6 Which vessels carry blood to the heart?
--Veins
Page 16 Column 2 Paragraph 2

7 What do we call the largest artery?
--Aorta
Page 16 Column 2 Paragraph 2

8 What is the aorta?
--The largest artery
Page 16 Column 2 Paragraph 2

9 What does the aorta do?
--Carries freshly oxygenated blood to the body
Page 16 Column 2 Paragraph 2

10 What are capillaries?
--tiny blood vessels where the arteries end and the veins begin
Page 16 Column 2 Paragraph 2

11 What happens in capillaries?
--Oxygen, nutrients and waste products are exchanged with individual body cells
Page 16 Column 2 Paragraph 2

12 What are the largest veins called?
--Cranial vena cava and caudal vena cava
Page 16 Column 2 Paragraph 2

13 What is the function of the cranial and caudal vena cava?
--Carry oxygen depleted blood back to the heart
Page 16 Column 2 Paragraph 2

14 Which vessels carry blood back to the heart?
--Cranial vena cava and caudal vena cava
Page 16 Column 2 Paragraph 2

15 What is the name of the vessel that carries blood from the heart to the lungs?
--Pulmonary artery
Page 16 Column 2 Paragraph 2

16 What is the name of the vessel that carries oxygenated blood from the lungs to the heart?
--Pulmonary vein
Page 16 Column 2 Paragraph 2

17 Describe the function of the pulmonary artery.
--Carries oxygen-depleted blood from the heart to the lungs
Page 16 Column 2 Paragraph 2

18 Describe the function of the pulmonary vein.
--Carries oxygenated blood from the lungs to the heart
Page 16 Column 2 Paragraph 2

19 Describe the circulatory system, starting at the heart.
--The heart pumps blood through arteries to the capillaries where oxygen and nutrients are exchanged for waste products, and back through the veins to the heart. That blood is pumped by the heart to the lungs where it is oxygenated and returned to the heart to begin the cycle again.
Page 16 Column 2 Paragraph 2

1 What is the fluid in the blood called?
--Plasma
Page 16 Column 2 Paragraph 3

2 What is blood composed of?
--Cells suspended in a fluid called plasma
Page 16 Column 2 Paragraph 3

3 What is the majority of the cells in the blood?
--Red blood cells
Page 16 Column 2 Paragraph 3

4 Where is hemoglobin found?
--In red blood cells
Page 16 Column 2 Paragraph 3

5 What is the function of hemoglobin?
--It carries oxygen and carbon dioxide
Page 16 Column 2 Paragraph 3

6 What gives blood its characteristic red color?
--Hemoglobin
Page 16 Column 2 Paragraph 3

7 What is the purpose of white blood cells?
--Fight infection or invasion of anything foreign
Page 16 Column 2 Paragraph 4

8 What type of cell fights infection?
--White blood cells
Page 16 Column 2 Paragraph 4

9 What is the function of platelets?
--They help with blood clotting
Page 16 Column 2 Paragraph 4

10 What are the three types of cells found in blood?
--Red blood cells, white blood cells, platelets
Page 16 Column 2 Paragraph 4

11 What does the lymphatic system do?
--Returns to the blood the fluid that has leaked out of blood vessels
Page 17 Column 1 Paragraph 1

12 How does lymph fluid move?
--it moves by muscular or intestinal activity
Page 17 Column 1 Paragraph 1

13 What do lymph nodes do?
--Filter lymph fluid and make some white blood cells.
Page 17 Column 1 Paragraph 1

14 Where is the spleen located?
--Behind the stomach
Page 17 Column 1 Paragraph 2

15 What is the function of the spleen?
--Filters blood
--Destroys old red blood cells
-Stores red blood cells
--Produces certain kinds of white blood cells
Page 17 Column 1 Paragraph 2

<u>Unit three – Chapter Five – Digestive and Urinary Systems</u>

16 What are the two primary parts of the digestive system?
--Alimentary canal and accessory glands
Page 18 Column 1 Paragraph 1

17 Name the parts of the alimentary canal.
--Lips, mouth, teeth, tongue, esophagus, stomach, small intestine, large intestine, anus
Page 18 Column 1 Paragraph 1

18 Name the accessory glands of the digestive system.
--Liver, pancreas, and salivary glands
Page 18 Column 1 Paragraph 1

1. What is the function of the digestive system?
--To process the food the cat eats
Page 18 Column 1 Paragraph 1

2. What is the function of the intestines?
--Extract and absorb nutrients and eliminate waste
Page 18 Column 1 Paragraph 1

3. When eating, how does a cat use its tongue?
--To lap up liquids
--To scrape food off bones
Page 18 Column 1 Paragraph 2

4. At what age does a kitten lose its Milk teeth?
--Between five and seven months
Page 18 Column 1 Paragraph 3

5. Name the three layers of a tooth.
--Enamel, dentine and pulp
Page 18 Column 2 Paragraph 1

6. Where are the salivary glands located?
--Behind the jaw
Page 18 Column 2 Paragraph 2

7. What is the function of the salivary glands?
--Moisten food to aid in swallowing and digesting
Page 18 Column 2 Paragraph 2

8. What glands are located behind the jaw?
--Salivary glands
Page 18 Column 2 Paragraph 2

9. Which systems share the pharynx?
--The digestive and the respiratory systems
Page 18 Column 2 Paragraph 3

10. What is the esophagus?
--A strong elastic tube that carries food from the pharynx to the stomach
Page 18 Column 2 Paragraph 4

11. What happens to food in the stomach?
--Acid liquids help to break down proteins
Page 19 column 1 Paragraph 1

12. What is the pylorus?
--A muscular valve at the bottom of the stomach
Page 19 Column 1 Paragraph 1

13. What does the pylorus do?
--Moves food from the stomach into the small intestine
Page 19 Column 1 Paragraph 1

14. What structure is responsible for moving food into the small intestine?
--Pylorus
Page 19 Column 1 Paragraph 1

15. What do we call the first section of the small intestine?
--Duodenum
Page 19 Column 1 Paragraph 2

16. What is the duodenum?
--the first section of the small intestine
Page 19 Column 1 Paragraph 2

17. What are the three substances that break down proteins and carbohydrates in the small intestine?
--Digestive enzymes --Bile
--Pancreatic juices
Page 19 Column 1 Paragraph 2

18. What happens to food in the small intestine?
--It is broken down by the digestive substances so it can be absorbed into the body, with the remainder being moved on into the large intestine.
Page 19 Column 1 Paragraph 2

19. What does the large intestine do?
--Absorbs moisture out of the waste products and passes it on out of the body
Page 19 Column 1 Paragraph 3

1 What do we call the last segment of the large intestine?
--Rectum
Page 19 Column 1 Paragraph 3

2 What do we call the closure at the end of the rectum?
--Anus
Page 19 Column 1 Paragraph 3

3 Which is the largest organ in a cat's body?
--Liver
Page 19 Column 1 Paragraph 4

4 Where is the liver located?
--Just behind the diaphragm and mostly on the right side of the body
Page 19 Column 1 Paragraph 4

5 What are the functions of the liver?
--Filter blood
--Destroy toxins in the blood
--Produce proteins
--Manufacture bile
--Store sugar (glycogen)
Page 19 Column 1 Paragraph 4

6 What does bile do?
--Aids in digestion of fats
Page 19 Column 2 Paragraph 1

7 Where is bile stored?
--In the gall bladder
Page 19 Column 2 Paragraph 1

8 What are the two substances produced by the pancreas?
--Digestive enzymes --Insulin
Page 19 Column 2 Paragraph 2

9 What do we call the glands that produce insulin?
--Islets of Langerhans
Page 19 Column 2 Paragraph 2

10 What causes diabetes to occur?
--Lack of insulin
Page 19 Column 2 Paragraph 2

11 What do the Islets of Langerhans do?
--Produce insulin
Page 19 Column 2 Paragraph 2

12 Name the parts of the cat's urinary system.
--Kidneys, ureters, bladder, urethra
Page 19 Column 2 Paragraph 3

13 Where are the kidneys located?
--On either side of the body, in the lumbar region, between the ribs and the pelvix
Page 19 Column 2 Paragraph 3

14 What is the function of the kidneys?
--they filter blood to remove the liquid waste product called urine
Page 19 Column 2 Paragraph 3

15 What happens to urine once it is passed from the kidneys?
--It passes through the ureters to the bladder where it is stored until it is discharged through the urethra to the exterior of the cat
Page 19 Column 2 Paragraph 3

<u>Unit Three – Chapter Six – Reproductive System</u>

16 What is the technical term for spaying?
--Ovariohysterectomy
Page 20 Column 1 Paragraph 1

17 What are the tomcats organs of reproduction?
--Penis, testicles, prostate gland
Page 20 Column 1 Paragraph 4

18 What do we call the sac-like structure that holds the testicles?
--Scrotum
Page 20 Column 1 Paragraph 4

1 What are the functions of the testicles?
--Produce and store sperm
--Produce testosterone
Page 20 Column 2 Paragraph 1

2 What is testosterone?
--A hormone that is essential in sexual development and activity
Page 20 Column 2 Paragraph 1

3 Where are sperm produced?
--In the testicles
Page 20 Column 2 Paragraph 1

4 What is the purpose of the prostate gland?
--It produces seminal fluid which transports sperm
Page 20 Column 2 Paragraph 1

5 What is copulation?
--The mating act
Page 20 Column 2 Paragraph 2

6 In what structure does a sperm fertilize an egg?
--In the oviduct
Page 20 Column 2 Paragraph 2

7 Name the parts of a female cat's reproductive system.
--Vulva, vagina, cervix, uterus, oviducts, ovaries
Page 20 Column 2 Paragraph 3

8 In what body structure are kitten embryos implanted?
--Horns of the uterus
Page 21 Column 1 Paragraph 1

9 What is an oviduct?
--A tiny tube that connects the ovary to the uterus
Page 21 Column 1 Paragraph 1

10 What is the estrous cycle?
--A recurrent pattern of sexual receptivity followed by periods of time without sexual receptivity in the female
Page 21 Column 2 Paragraph 1

11 What is estrus?
--Heat; time of sexual receptivity or breeding
Page 21 Column 2 Paragraph 1

12 What are the two hormones produced by the ovaries?
--Estrogen
--Progesterone
Page 21 Column 2 Paragraph 1

13 What is a follicle?
--A small fluid sac that will contain an egg
Page 21 Column 2 Paragraph 2

14 What does estrogen do?
--It is responsible for the "in heat" or estrus behaviors of the cat
Page 21 Column 2 Paragraph 2

15 What is ovulation?
--Rupture of the follicle and release of the egg into the oviduct
Page 21 Column 2 Paragraph 2

16 What is induced ovulation>
--Ovulation occurs as a result of mating
Page 21 Column 2 Paragraph 3

17 After ovulation, what happens to the follicle?
--It changes to form a corpora leuta
Page 21 Column 2 Paragraph 3

18 What does the corpora leuta do?
--It produces progesterone
Page 21 Column 2 Paragraph 3

1 What is the purpose of progesterone?

--It is a hormone needed to maintain pregnancy

Page 21 Column 2 Paragraph 3

2 What does the term "seasonal polyestrous" mean?

--Having many estrous cycles only during certain times of the year

Page 21 Column 2 Paragraph 4