

**SIR ARTHUR LEWIS COMMUNITY COLLEGE**  
**DIVISION OF AGRICULTURE**  
**END OF SEMESTER ONE EXAMS**

**ASSOCIATE DEGREE IN AGRICULTURE**

**ANIMAL SCIENCE- ASC 102**

# ASI

**PAPER ONE**

**MULTIPLE CHOICE**

**1 hour**

**INSTRUCTIONS: THIS EXAM CONSISTS OF 60 MULTIPLE CHOICE QUESTIONS. YOU ARE REQUIRED TO ANSWER ALL QUESTIONS ON THE ANSWER SHEET PROVIDED.**

1. An example of a macroscopic anatomic part is:
  - a. ions
  - b. cells
  - c. tissues
  - d. muscles
  
2. What plane is perpendicular to the sagittal and transverse plane?
  - a. dorsal
  - b. mid sagittal
  - c. median
  - d. cranial
  
3. The word that means toward the nose is:
  - a. cranial
  - b. proximal
  - c. dorsal
  - d. rostral
  
4. A plane across the body that divides it into cranial (head-end) and caudal (tail-end) parts that are not necessarily equal is:
  - a. transverse
  - b. dorsal
  - c. sagittal
  - d. Mid sagittal
  
5. Ribosomes produce:
  - a. glucose
  - b. lipids
  - c. proteins
  - d. bacteria
  
6. This cell structure modifies, packages, and distributes proteins destined for secretion or intracellular use.
  - a. golgi apparatus
  - b. lysosomes
  - c. ribosomes
  - d. mitochondria

7. The outer layer of the nuclear membrane is continuous with the:
  - a. mitochondria
  - b. cell membrane
  - c. endoplasmic reticulum
  - d. centrioles
  
8. Which activity requires energy expenditure?
  - a. osmosis
  - b. facilitated diffusion
  - c. active transport
  - d. passive diffusion
  
9. Reproductive cells divide via a process known as:
  - a. interphase
  - b. mitosis
  - c. meiosis
  - d. somatic cell division
  
10. Which phase of mitosis could be called the metabolic phase?
  - a. interphase
  - b. mitotic phase
  - c. prophase
  - d. telophase
  
11. The end of telophase is marked by:
  - a. metaphase
  - b. cytokinesis
  - c. anaphase
  - d. prophase
  
12. The somatic cell is actively dividing during this phase:
  - a. mitotic phase
  - b. interphase
  - c. meiosis
  - d. G1 and G2
  
13. This tissue transmits information around the body and controls body functions:
  - a. nervous
  - b. connective
  - c. muscle
  - d. epithelial
  
14. Functions of epithelial cells include:
  - a. secretion or excretion of biochemical substances
  - b. filtering of biochemical substances
  - c. providing sensory input
  - d. all of the above
  
15. This type of cellular junction is found between epithelial cells and is a strong, welded plaque or thickening formed of filaments that interlock with one another.
  - a. gap junction
  - b. desmosome
  - c. tight junction
  - d. basement membrane
  
16. This structure acts as a partial barrier between the epithelial cell and the underlying connective tissue.
  - a. connexon
  - b. gap junction
  - c. basement membrane
  - d. plaque

17. Which of the following are functions of connective tissue?
- forms protective sheath around organs
  - acts as a reserve for energy
  - plays a vital role in the healing process and in controlling invading organisms
  - all of the above
18. Fat, cartilage, and bone are examples of:
- epithelial tissue
  - connective tissue
  - muscle tissue
  - nervous tissue
19. Examples of irregularly shaped bones include:
- sesamoids and vertebrae
  - vertebrae and tarsal bones
  - scapulas and sesamoids
  - skull bones and carpal bones
20. What type of muscle is referred to as voluntary striated muscle?
- cardiac muscle
  - smooth muscle
  - skeletal muscle
  - none of the above
21. What structure connects muscles to bones?
- tendons
  - muscle bellies
  - ligaments
  - sarcomeres
22. What type of muscle is called involuntary striated muscle?
- skeletal
  - cardiac
  - smooth
  - none of the above
23. Which structures are lined with simple columnar epithelium?
- mouth, esophagus, and small intestines
  - stomach, small intestines, and large intestine
  - mouth, pharynx, esophagus, and anus
  - large intestine, rectum, and anus
24. Which teeth in both carnivores and herbivores typically have flatter occlusal surfaces used for grinding?
- molars
  - premolars
  - canines
  - incisors
25. How many upper incisors do ruminants have?
- 2
  - 0
  - 4
  - 6
26. What part of the stomach is responsible for most of the grinding up of swallowed food and regulates hydrochloric acid?
- pyloric antrum
  - cardia
  - body
  - fundus



27. Which statement is true regarding ruminant digestion?
- The reticulum and omasum contract in a coordinated manner.
  - Hardware disease refers to a sharp metal or wire object piercing the cranial wall of the rumen.
  - The rumen carries out fermentative processes that create energy and cellular building material.
  - Eructation refers to the fermentative process of creating energy and cellular building material from fermentation.
28. Which statement is false regarding ruminant digestion?
- Digestive enzymes in the ruminant are produced by glands in and along the intestinal tract.
  - Cellulose and pectin (from plant cell walls) cannot be digested by monogastric animals.
  - Ruminants convert certain volatile fatty acids to glucose in the liver.
  - Microbes themselves provide the major source of protein to the ruminant.
29. The digestive compartment of ruminants is a series of muscular sacs separated from each other by long, muscular folds of wall called pillars.
- reticulum
  - abomasum
  - rumen
  - omasum
30. Which of the following is a function of the liver?
- production of aminopeptidase and carboxypeptidase
  - production of red blood cells
  - production of ascites
  - production of cholesterol
31. What carries bile acids from the gallbladder to the common bile duct?
- cystic duct
  - pancreatic duct
  - hepatic duct
  - hepatic portal system
32. The posterior pituitary gland receives these hormones from the hypothalamus.
- luteinizing hormone
  - oxytocin
  - b and d
  - antidiuretic hormone
33. The pituitary gland is also known as the:
- hypophysis
  - parahypophysis
  - lesser hypothalamus
  - portal pituitary
34. This hormone helps trigger and maintain lactation:
- prolactin
  - luteinizing hormone
  - oxytocin
  - parathormone
35. The hyperglycemic effect results from the release of \_\_\_\_\_ from the anterior pituitary.
- insulin
  - thyroid-stimulating hormone
  - growth hormone
  - prolactin

36. Adrenocorticotrophic hormone (ACTH) production:
- is generally regulated by feedback from hormones of the adrenal cortex in a negative feedback mechanism
  - can be released quickly via stimulation of the hypothalamus by other parts of the brain
  - produced by the posterior pituitary
  - a and b
37. Follicle-stimulating hormone (FSH):
- stimulates the lining cells of follicles in the female to produce estrogen
  - stimulates the production of testosterone in males
  - stimulates oogenesis in males
  - stimulates the lining cells of follicles in the female to produce testosterone
38. This structure produces progestin hormones needed to maintain pregnancy:
- uterus
  - corpus luteum
  - ovary
  - the embryo
39. Rising amounts of this hormone in the blood cause the anterior pituitary to produce less and less follicle-stimulating hormone (FSH).
- progestins
  - estrogen
  - oxytocin
  - prolactin
40. This hormone stimulates strong uterine contractions in the uterus at the time of parturition:
- prolactin
  - estrogen
  - progesterone
  - oxytocin
41. Calcitonin:
- is released by the parathyroid gland
  - functions to prevent hypercalcemia
  - functions to prevent hypocalcemia
  - is released by the adrenal medulla
42. The target for epinephrine and norepinephrine is:
- bones only
  - mammary gland only
  - thyroid gland only
  - the whole body
43. The pancreas produces insulin, which functions to:
- raise blood levels of glucose
  - lower blood levels of glucose
  - inhibit the secretion of growth hormone (GH)
  - diminish the activity of the gastrointestinal tract
44. Luteinizing hormone is also known as:
- testosterone
  - interstitial cell-stimulating hormone (ICSH)
  - androgens
  - follicle-stimulating hormone (FSH)
45. This route removes nearly all the soluble waste products from blood and transports them out of the body.
- respiratory system
  - urinary system
  - digestive system

- d. sweat glands
46. The urinary system includes:
- a. one urinary bladder, two ureters, one urethra, and two kidneys
  - b. two kidneys, one urethra, two ureters, and one urinary bladder
  - c. one kidney, two urethras, two ureters, and one urinary bladder
  - d. one ureter, one urethra, two kidneys, and one urinary bladder
47. This is the basic functional unit of the kidney:
- a. nephron
  - b. loop of Henle
  - c. Bowman's capsule
  - d. glomerulus
48. Which of the following structures is not part of the upper respiratory tract?
- a. alveoli
  - b. larynx
  - c. pharynx
  - d. trachea
49. Which of the following is a function of the nasal passages?
- a. humidifying inspired air
  - b. filtering inspired air
  - c. warming inspired air
  - d. all of the above
50. Which of the following is a function of the larynx?
- a. oxygen and carbon dioxide exchange
  - b. digestion of food
  - c. prevention of foreign material from being inhaled
  - d. pH balance of blood
51. When does the epiglottis cover the glottis?
- a. during swallowing
  - b. during voice production
  - c. when foreign material is inhaled
  - d. a and c
52. What word refers to the chromosomes that occur in pairs?
- a. haploid
  - b. meiosis
  - c. diploid
  - d. mitosis
53. Where are androgens produced in the male?
- a. spermatozoa
  - b. epididymis
  - c. seminiferous tubules
  - d. interstitial cells
54. Why is the mid-piece of the spermatozoon referred to as the "power plant" of the cell?
- a. Its long thin tail propels it forward.
  - b. It contains enzymes that allow it to reach and penetrate the ovum.
  - c. It is responsible for the male libido.
  - d. It contains many energy-producing mitochondria.
55. In cold conditions, this muscle contracts to pull the testes up closer to the body for warmth.
- a. gubernaculum
  - b. cremaster
  - c. detrusor
  - d. inguinal



56. When are spermatozoa transported from the vas deferens to the abdominal urethra?
- during ejaculation
  - just before they enter the efferent ducts
  - immediately after leaving the seminiferous tubules
  - right after they fertilize an ovum
57. Where does fertilization USUALLY take place?
- fallopian tube
  - round ligament
  - vagina
  - uterus
58. Which of the following occur during estrus?
- Physical and behavioral changes signal the female's willingness to breed to the male.
  - The estrogen level from the mature follicle has reached its lowest level.
  - Granulosa cells begin to multiply.
  - Follicles begin to develop and grow.
59. Where does blood that has just been oxygenated in the lungs flow next?
- left atrium
  - right atrium
  - right ventricle
  - left ventricle
60. Why is blood in the systemic circulation under higher pressure than blood in the pulmonary or coronary circulation?
- There is more blood in the systemic circulatory system at any given time than in the coronary or pulmonary systems.
  - It takes more pressure to carry the blood the far distance to every extremity than it does to travel the shorter pulmonary and coronary routes.
  - Blood in the systemic circulation encounters more resistance to flow.
  - All of the above.