

**SIR ARTHUR LEWIS COMMUNITY COLLEGE**

**DIVISION OF AGRICULTURE  
END OF SEMESTER ONE EXAMS**

**ASSOCIATE DEGREE IN AGRICULTURE**



**ANIMAL SCIENCE- ASC 102**

**DECEMBER 2013**

**PAPER ONE  
MULTIPLE CHOICE**

#A61

**1 hour**

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

**CELLS**

1. Ribosomes produce:
  - a. Glucose
  - b. Lipids
  - c. Proteins
  - d. Bacteria
  
2. This cell structure modifies, packages, and distributes proteins destined for secretion or intracellular use.
  - a. Golgi apparatus
  - b. Lysosomes
  - c. Ribosomes
  - d. Mitochondria
  
3. The outer layer of the nuclear membrane is continuous with this structure:
  - a. Mitochondria
  - b. Cell membrane
  - c. Endoplasmic reticulum
  - d. Centrioles
  
4. Which of the following activities requires energy expenditure?
  - a. Osmosis
  - b. Facilitated diffusion
  - c. Active transport
  - d. Passive diffusion

**FOR NUMBERS 5-13 CHOOSE FROM THE FOLLOWING LIST:**

- a. mitosis   b. meiosis   c. interphase   d. cytokinesis
  
5. Division of the cytoplasm
6. Replication of chromosomes occurs here
7. Has the G1, S, and G2 phase of the cell cycle
8. Reduces the number of chromosomes

9. Two daughter cells produced
10. Four daughter cells produced
11. One replication of chromosomes
12. Two cell divisions occur
13. Produces gametes

#### **TISSUE TYPES AND FUNCTIONS**

14. This tissue transmits information around the body and controls body functions:

- a. Nervous
- b. Connective
- c. Muscle
- d. Epithelial

15. 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

16. Which of the following is false about endocrine glands?

- a. They are ductless
- b. Their secretions are distributed throughout the body
- c. An example of an endocrine gland is the pituitary gland

17. Which of the following is true about exocrine glands?

- a. Their secretions act locally
- b. They are ductless
- c. Their secretions are distributed throughout the body
- d. An example of an exocrine gland is the pituitary gland

18. Which of the following are functions of connective tissue?

- a. Forms protective sheath around organs
- b. Acts as a reserve for energy
- c. Plays a vital role in the healing process and in controlling invading organisms
- d. All of the above

19. Fat, cartilage, and bone are examples of:

- a. Epithelial tissue
- b. Connective tissue
- c. Muscle tissue
- d. Nervous tissue

20. What type of muscle is referred to as voluntary striated muscle?

- a. Cardiac muscle
- b. Smooth muscle
- c. Skeletal muscle
- d. None of the above

21. What type of muscle is called involuntary striated muscle?

- a. Skeletal
- b. Cardiac
- c. Smooth
- d. None of the above

22. Which structures are lined with simple columnar epithelium?

- a. Mouth, esophagus, and small intestines
- b. Stomach, small intestines, and large intestine
- c. Mouth, pharynx, esophagus, and anus
- d. Large intestine, rectum, and anus

### **DIGESTIVE SYSTEM**

23. Which statement is true regarding ruminant digestion?

- a. The reticulum and omasum contract in a coordinated manner.
- b. Hardware disease refers to a sharp metal or wire object piercing the cranial wall of the rumen.
- c. The rumen carries out fermentative processes that create energy and cellular building material.
- d. Eructation refers to the fermentative process of creating energy and cellular building material from fermentation.

24. Which of the following is a function of the liver?

- a. Production of aminopeptidase and carboxypeptidase
- b. Production of red blood cells
- c. Production of ascites
- d. Production of cholesterol

25. What carries bile acids from the gallbladder to the common bile duct?

- a. Cystic duct
- b. Pancreatic duct
- c. Hepatic duct
- d. Hepatic portal system

### **ENDOCRINE SYSTEM**

26. The posterior pituitary gland receives these hormones from the hypothalamus.

- a. Luteinizing hormone
- b. Oxytocin
- c. Antidiuretic hormone
- d. b and d

27. The pituitary gland is also known as the:

- a. Hypophysis
- b. Parahypophysis
- c. Lesser hypothalamus
- d. Portal pituitary

28. This hormone helps trigger and maintain lactation:

- a. Prolactin
- b. Luteinizing hormone
- c. Oxytocin
- d. Parathormone

29. The hyperglycemic effect results from the release of \_\_\_\_\_ from the anterior pituitary.

- a. Insulin
- b. Thyroid-stimulating hormone
- c. Growth hormone
- d. Prolactin

30. Follicle-stimulating hormone (FSH):

- a. Stimulates the lining cells of follicles in the female to produce estrogen
- b. Stimulates the production of testosterone in males
- c. Stimulates oogenesis in males
- d. Stimulates the lining cells of follicles in the female to produce testosterone

31. This structure produces progestin hormones needed to maintain pregnancy:

- a. Uterus
- b. Corpus luteum
- c. Ovary
- d. The embryo

32. Rising amounts of this hormone in the blood cause the anterior pituitary to produce less and less follicle-stimulating hormone (FSH).

- a. Progestins
- b. Estrogen
- c. Oxytocin
- d. Prolactin

33. This hormone stimulates strong uterine contractions in the uterus at the time of parturition:

- a. Prolactin
- b. Estrogen
- c. Progesterone
- d. Oxytocin

34. Calcitonin:

- a. Is released by the parathyroid gland
- b. Functions to prevent hypercalcemia
- c. Functions to prevent hypocalcemia
- d. Is released by the adrenal medulla

35. The target for epinephrine and norepinephrine is:

- a. Bones only
- b. Mammary gland only
- c. Thyroid gland only
- d. The whole body

36. The pancreas produces insulin, which functions to:

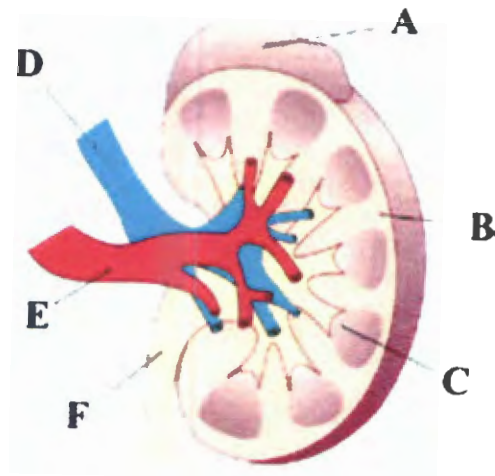
- a. Raise blood levels of glucose
- b. Lower blood levels of glucose
- c. Inhibit the secretion of growth hormone (GH)
- d. Diminish the activity of the gastrointestinal tract

37. Luteinizing hormone is also known as:

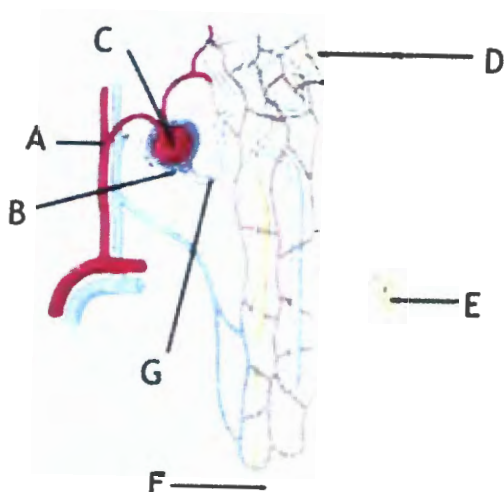
- a. Testosterone
- b. Interstitial cell-stimulating hormone (ICSH)
- c. Androgens
- d. Follicle-stimulating hormone (FSH)

## URINARY SYSTEM

Use the following diagram to answer questions 41 and 42



38. The "A" arrow points to the
- Adrenal gland
  - Cortex
  - Ureter
  - Glomerulus
39. The arrow "B" points to the:
- Cortex
  - Renal pelvis
  - Medulla
  - Bowman's capsule
40. After blood enters the kidneys it moves to the
- Proximal tubule
  - Distal tubule
  - Collecting duct
  - Glomerulus
41. The urinary system includes:
- One urinary bladder, two ureters, one urethra, and two kidneys
  - Two kidneys, two urethras, one urethra, and one urinary bladder
  - One kidney, two urethras, two ureters, and one urinary bladder
  - One ureter, one urethra, two kidneys, and one urinary bladder
42. This is the basic functional unit of the kidney:
- Nephron
  - Loop of Henle
  - Bowman's capsule
  - Glomerulus



43. The structure labeled "B" is:
- Bowman's capsule
  - Cortex
  - Collecting duct
  - Nephron
44. The structure labeled "G" is
- Renal artery
  - Proximal tubule
  - Distal tubule
  - Renal vein
45. What tube carries urine outside of the body from the bladder
- Ureter
  - Distal tubule
  - Loop of Henle
  - Urethra
46. The kidneys are located:
- On either side of the lung
  - Dorsal to the liver
  - Within the mesentery of the small intestine
  - Near the middle of the back on either side of the spine

## REPRODUCTIVE SYSTEM

47. Where are androgens produced in the male?
- Spermatozoa
  - Epididymis
  - Seminiferous tubules
  - Interstitial cells
48. In cold conditions, this muscle contracts to pull the testes up closer to the body for warmth.
- Gubernaculum
  - Cremaster
  - Detrusor
  - Inguinal
49. What is another name for interstitial cell stimulating hormone (ICSH)?
- Testosterone
  - Luteinizing hormone
  - Oxytocin
  - Parathyroid hormone
50. 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
51. Why is the mid piece of the spermatozoon referred to as the "power plant" of the cell?
- Its long thin tail propels it forward.
  - It contains enzymes that allow it to reach and penetrate the ovum.
  - It is responsible for the male libido.
  - It contains many energy-producing mitochondria.
52. 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

53. Where does fertilization USUALLY take place?

- a. Fallopian tube
- b. Round ligament
- c. Vagina
- d. Uterus

54. What hormone level must increase (or surge) before ovulation will occur?

- a. Follicle stimulating hormone
- b. Estrogen
- c. Luteinizing hormone
- d. Progesterone

55. Which of the following occur during estrus?

- a. Physical and behavioral changes signal the female's willingness to breed to the male.
- b. The estrogen level from the mature follicle has reached its lowest level.
- c. Granulosa cells begin to multiply.
- d. Follicles begin to develop and grow.

### **CIRCULATORY SYSTEM**

56. Where does blood that has just been oxygenated in the lungs flow next?

- a. Left atrium
- b. Right atrium
- c. Right ventricle
- d. Left ventricle

57. Why is blood in the systemic circulation under higher pressure than blood in the pulmonary or coronary circulation?

- a. There is more blood in the systemic circulatory system at any given time than in the coronary or pulmonary systems.
- b. 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.
- c. Blood in the systemic circulation encounters more resistance to flow.
- d. All of the above.

### **RESPIRATORY SYSTEM**

58. When the diaphragm contracts, which of the following occur?

- a. It flattens somewhat.
- b. The lungs inflate with air.
- c. The liver and other abdominal organs move caudally.
- d. All of the above

59. Which of the following are the main inspiratory muscles?

- a. Internal intercostal and external intercostal
- b. External intercostal and diaphragm
- c. Pectoral and internal intercostal
- d. Sternocleidomastoideus and diaphragm

60. Which of the following are the main expiratory muscles?

- a. Internal intercostal and external intercostal
- b. Internal intercostal and diaphragm
- c. Internal intercostal and abdominal muscles
- d. External intercostal and abdominal muscles

Animal Science



Choose the Best Answer  
Fill-in Bubble Completely.

- A B C  D E

Student ID: \_\_\_\_\_ Date: \_\_\_\_\_

Semester: 1

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| 18. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 38. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D | 58. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D |
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