DAGRI PAST PAPERS

SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

END OF SEMESTER ONE EXAMS

ASSOCIATE DEGREE IN AGRICULTURE

ANIMAL SCIENCE- ASC 102

#A56

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. 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

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. 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

17. 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

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. Examples of irregularly shaped bones include:

    a. sesamoids and vertebrae
    b. vertebrae and tarsal bones
    c. scapulas and sesamoids
    d. skull bones and carpal bones

21. 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

22. What structure connects muscles to bones?

a. tendons
b. muscle bellies
c. ligaments
d. sarcomeres

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

a. skeletal
b. cardiac
c. smooth
d. none of the above

24. 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

25. Which teeth in both carnivores and herbivores typically have flatter occlusal surfaces used for grinding?

a. molars
b. premolars
c. canines
d. incisors

26. How many upper incisors do ruminants have?

a. 2
b. 0
c. 4
d. 6

27. What part of the stomach is responsible for most of the grinding up of swallowed food and regulates hydrochloric acid?

a. pyloric antrum
b. cardia
c. body
d. fundus

28. 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.

29. Which statement is false regarding ruminant digestion?

a. Digestive enzymes in the ruminant are produced by glands in and along the intestinal tract.
b. Cellulose and pectin (from plant cell walls) cannot be digested by monogastric animals.
c. Ruminants convert certain volatile fatty acids to glucose in the liver.
d. Microbes themselves provide the major source of protein to the ruminant.

30. This digestive compartment of ruminants is a series of muscular sacs separated from each other by long, muscular folds of wall called pillars.

a. reticulum
b. abomasum
c. rumen
d. omasum

31. 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

32. 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

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

a. luteinizing hormone
b. oxytocin
c. antidiuretic hormone
d. b and d

34. The pituitary gland is also known as the:

a. hypophysis
b. parahypophysis
c. lesser hypothalamus
d. portal pituitary

35. This hormone helps trigger and maintain lactation:

a. prolactin
b. luteinizing hormone
c. oxytocin
d. parathormone

36. The hyperglycemic effect results from the release of _____ from the anterior pituitary.

a. insulin
b. thyroid-stimulating hormone
c. growth hormone
d. prolactin

37. Follicle-stimulating hormone (FSH):

a. simulates 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

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

a. uterus
b. corpus luteum
c. ovary
d. the embryo

39. 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

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

a. prolactin
b. estrogen
c. progesterone
d. oxytocin

41. 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

42. The target for epinephrine and norepinephrine is:

a. bones only
b. mammary gland only
c. thyroid gland only
d. the whole body

43. 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

44. Luteinizing hormone is also known as:

a. testosterone
b. interstitial cell-stimulating hormone (ICSH)
c. androgens
d. follicle-stimulating hormone (FSH)

45. This route removes nearly all the soluble waste products from blood and transports them out of the body.

a. respiratory system
b. urinary system
c. 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. Where are androgens produced in the male?

a. spermatozoa
b. epididymis
c. seminiferous tubules
d. interstitial cells

51. Why is the midpiece 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.

52. When are spermatozoa transported from the vas deferens to the abdominal urethra?

a. during ejaculation
b. just before they enter the efferent ducts
c. immediately after leaving the seminiferous tubules
d. right after they fertilize an ovum

53. Where does fertilization USUALLY take place?

a. fallopian tube
b. round ligament
c. vagina
d. uterus

54. 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.

55. 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

56. 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.

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

a. follicle stimulating hormone
b. estrogen
c. luteinizing hormone
d. progesterone

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