Please bubble in your Student ID number, bubble in Test Form A, and keep your eyes on your own exam.

Please choose the best answer:

1. The length of the urethra in the female is:
   a. one and a half inches
   b. three inches
   c. six inches
   d. one half inch

2. The following is not true about the bladder:
   a. three layers of smooth muscle make up the wall.
   b. the muscle is called detrusor muscle.
   c. the trigone is the area marked by the exit of the ureters and the entrance of the urethra.
   d. the ureters have a fold of mucous membrane to prevent urine from entering the ureters upon micturition.

3. Hypersecretion of the thyroid stimulating hormone (TSH) causes
   a. cretinism
   b. myxedema
   c. goiter if individual is deficient in iodine
   d. acromegaly

4. The superior pole of the left kidney is at which vertebral level?
   a. T-2
   b. L-3
   c. T-12
   d. T-8

5. A podocyte is a/an:
   a. epithelial cell lining the parietal wall of the Bowman's capsule
   b. major cell lining the base of the loop of Henle
   c. epithelial cell lining the visceral wall of the Bowman's capsule
   d. endothelial cell lining the ureter
2. Aldosterone from the adrenal cortex acts on the _____ to raise the blood pressure.
   a. distal convoluted tubule
   b. juxtaglomerular apparatus
   c. loop of Henle
   d. proximal convoluted tubule

7. The greatest amount of water in the glomerular filtrate is reabsorbed in the:
   a. parietal layer of the Bowman's capsule
   b. distal convoluted tubule
   c. proximal convoluted tubule
   d. loop of Henle

8. The most important structure in determining the constituents in the glomerular filtrate is the:
   a. podocyte
   b. endothelial cell of the capillary
   c. basement membrane
   d. simple squamous cells of the parietal epithelium in the Bowman's capsule.

9. The pineal gland is not one of the following:
   a. found in the epithalamus
   b. is anterior to the thalamus
   c. liberates melatonin which acts on the gonads
   d. is derived from the diencephalon

10. The thyroid gland
    a. shrinks during pregnancy
    b. does not increase the basal metabolic rate (BMR)
    c. has an isthmus which lies on the thyroid cartilage
    d. has an isthmus which lies on the 2-4th tracheal rings

11. Which of the following vitamins is not stored in the liver?
    a. C
    b. A
    c. D
    d. E
12. Which of the following does not fit the thyroid gland?
   a. it is a storage gland
   b. the colloid contains thyroglobulin
   c. the follicles are filled with colloid
   d. the colloid contains T₃, triiodothyronine

13. Excess secretion of somatotrophs before puberty cause:
   a. dwarfism
   b. gigantism
   c. acromegaly
   d. electrolyte imbalance

14. The following is not a function of the liver:
   a. produces bile
   b. produces cholecystokinin
   c. phagocytizes old RBCs
   d. stores glycogen

15. Renin is associated with what structure?
   a. stomach mucosa
   b. antidiuretic hormone
   c. juxtaglomerular apparatus
   d. none of the above

16. Parathormone
   a. stimulates bone resorption
   b. acts on thyroid follicles
   c. does not balance calcium levels in the plasma
   d. acts only on chondrocytes

17. Basic features of the endocrine system do not include:
   a. rich in capillaries
   b. rich in ducts
   c. concentrated in different areas of the body
   d. all have different target organs

18. Which statement does not suit the adrenal gland?
   a. the adrenal gland is retroperitoneal
   b. we can live without the adrenal cortex without supplements
   c. glucocorticoids affect every cell in the body
   d. mineralocorticoids include the hormone, aldosterone
19. Which of the following is incorrect?
   a. the gall bladder stores about 50 cc of bile.
   b. bile emulsifies fat
   c. the gall bladder concentrates bile.
   d. the gall bladder is under the left side of the liver.

20. Most of the estrogen is produced by the:
   a. corpus luteum
   b. germinal epithelium
   c. theca interna of the ovarian follicle
   d. endometrium

21. Ptosis of the kidney refers to:
   a. too much connective tissue around the kidney
   b. too much adipose tissue around the kidney
   c. depletion of fat around the kidney
   d. a smooth fibrous membrane around the kidney

22. The hypothalamus regulates the anterior pituitary hormones by:
   a. a direct neuronal connection with the anterior pituitary
   b. releasing hormones into the arteries supplying the anterior pituitary
   c. releasing hormones into the hepatic portal system
   d. releasing hormones into the hypothalamic-hypophyseal portal system

23. Which of the following is not located near the left kidney?
   a. left adrenal gland
   b. pancreas
   c. ascending colon
   d. spleen

24. The pelvis of the ureter refers to the:
   a. the junction of the kidney with the urethra
   b. an expanded portion of the ureter that receives the major calyces
   c. a collection of collecting ducts
   d. the portion that directly receives the glomerular filtrate from the Bowman's capsule
25. Which ligament is not related to the ovary?
   a. ovarian ligament  
   b. mesosalpinx  
   c. broad ligament  
   d. falciform ligament

26. The gonadotrophs include:
   a. thyroid stimulating hormone  
   b. antidiuretic hormone  
   c. aldosterone  
   d. follicle stimulating hormone and leuteinizing hormone

27. In cirrhosis of the liver, one of the following is correct:
   a. connective tissue replaces hepatocytes  
   b. hepatocytes proliferate  
   c. Kupffer cells form RBCs  
   d. bile is formed in excess

28. The internal sphincter of the male urethra is:
   a. between the prostate and the urogenital diaphragm  
   b. between the prostate and the bladder  
   c. between the cavernous urethra and the prostate  
   d. the length of the cavernous urethra

29. The modified capillaries in the liver are called:
   a. coeliac vessels  
   b. hepatic capillaries  
   c. sinusoids  
   d. Kupffer channels

30. Diabetes insipidus refers to:
   a. a condition with too much glucose in the urine  
   b. a condition with too many amino acids in the urine  
   c. the passage of an abnormal amount of water in the urine  
   d. a defect in the anterior pituitary

31. The adrenal medulla produces
   a. deoxycorticosterone  
   b. cortisone  
   c. hydrocortisone  
   d. epinephrine
32. The posterior lobe of the pituitary is derived from the:
   a. diencephalon
   b. telencephalon
   c. mesencephalon
   d. metencephalon

33. Which hormone is not related to both testicular and ovarian functions?
   a. follicle stimulating hormone
   b. leuteinizing hormone (LH)
   c. testosterone
   d. thyroxine

34. The symptoms of cretinism include:
   a. increased BMR (basal metabolic rate)
   b. decreased BMR (basal metabolic rate)
   c. none of the others
   d. increased mental and physical activity

35. Thousands of sperm are formed each second throughout life in the adult healthy male. TRUE

36. Red blood corpuscles are only formed in the bone marrow. FALSE

37. Parathormone has the opposite effect of calcitonin. Parathormone lowers blood calcium. TRUE

38. The urethra runs through the clitoris just like the urethra runs through the penis. FALSE

39. About 2.5-6 ml of semen are ejaculated with each ejaculation. TRUE

40. During a vasectomy for birth control, the vas (ductus) deferens can be cut in two in the scrotum. TRUE

41. The seminal vesicles are the most common site of cancer formation in males over 70 years of age. FALSE

42. In the female there is no inguinal canal. FALSE

43. Sertoli cells form the blood-testis barrier. TRUE
44. Most semen comes from the prostate and not from the seminal vesicles. FALSE
45. The vagina is posterior to the anus. FALSE
46. Much of the myometrium, consisting of simple columnar epithelium, blood, glandular secretions and connective tissue, is sloughed off during menstruation. FALSE
47. The majority of ova are formed in the yolk sac before birth, not in the ovary after birth. TRUE
48. Catecholamines include epinephrine and norepinephrine and are found in the adrenal cortex. FALSE
49. The testes are filled with seminiferous tubules which contain germinal epithelium. TRUE
50. The labia majora and labia minora are part of the female vulva. TRUE
51. The acrosome provides energy for the tail of the sperm. FALSE
52. The head of the sperm is filled with mitochondria. FALSE
53. Estrogen is low in concentration before ovulation. FALSE
54. Follicle stimulating hormone stimulates the production of testosterone. FALSE
55. The vagina has no glands but receives secretions from the uterine glands. TRUE
56. Phagocytic Kupffer cells are found in the sinusoids. TRUE
57. Between about 10 to 50 years of age only about 480 ova reach maturity and leave the ovary. TRUE
58. The testes produce both sperm and testosterone. TRUE
59. The sperm mature primarily in the ductus deferens. FALSE
60. The mons pubis, with its subcutaneous fat pad, cushions the genitals during intercourse. TRUE

FUNCTIONAL ANATOMY IS FUNDAMENTAL TO ALL BIOLOGICAL SCIENCES.
ENJOY YOUR NEW KNOWLEDGE. AWAKEN AND INSPIRE OTHERS TO CARE FOR THEIR BODIES. EVERYONE WOULD GAIN.
AT 93 YEARS OF AGE, MY FATHER, A PHYSICIAN AND SCHOLAR OF COMPARATIVE RELIGIONS, SUMMED UP HIS VALUES IN A SINGLE, SIMPLE SENTENCE FOR ME. NOTHING NEW; IT HAS BEEN SAID MANY TIMES. “DO UNTO OTHERS AS YOU WISH OTHERS TO DO UNTO YOU.”