
NAME	LAST	FIRST
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INTEGRATIVE BIOLOGY 131
EXAMINATION III,
DEC. 9, 1998

PART I. True = A; False = B

1. Growth hormone, produced by cells in the posterior pituitary, influences the growth of the epiphyseal disc.
2. Antidiuretic hormone, formed by the anterior pituitary, enters the blood stream to act on the collecting ducts of the kidney.
3. The Islets of Langerhan, found at the base of the duodenal villi, secrete insulin.
4. Mineralcorticoids come from the adrenal medulla which originates from the neural crest cells.
5. Rennin, secreted by the adult's salivary glands, prevents milk from clotting.
6. Renin, formed from the juxtaglomerular apparatus, plays a role in liberating aldosterone from the distal convoluted tubule to stimulate the macula densa.
7. Amylase is an enzyme, formed in the stomach gastric glands, which helps with the break down of starches to simple sugars.
8. Serotonin comes from the crypts of Lieberkuhn and from nerve cells.
9. Testosterone is produced by the interstitial cells of the testes.
10. Oxytocin means swift birth and acts on the fundus of the uterus.
11. Follicle stimulating hormone, produced by the anterior pituitary, acts on the interstitial cells of the testes.
12. Bile is formed by hepatocytes, is stored in the gall bladder and emulsifies fats in the duodenum.

13. Glucose is reabsorbed in the distal convoluted tubule of the nephron.
14. One third of the cardiac output goes to the brain and one third of the cardiac output goes to the kidney.
15. About 100 cc of the glomerular filtrate is reabsorbed in the proximal convoluted tubule.
16. Urine made in the nephron is continuously flowing down the ureter to the urinary bladder.
17. The urinary bladder ordinarily holds about 300 cc of urine.
18. The kidney, the calyces, the pelvis of the kidney and the ureter are all retroperitoneal.
19. Hairs develop from the germinal epithelium of the skin.
20. Melanocytes are the pigmented cells in the stratum corneum in the epidermis.
21. The bulk of the seminal fluid is formed by the seminal vesicles.
22. Follicle stimulating hormone stimulates the theca interna to produce estrogen.
23. The vagina is lined with simple columnar, ciliated epithelium.
24. The endometrial cells from the fundus of the uterus are sampled during a Pap's smear to detect cancer.
25. The average time the ova are "traveling" down the Fallopian tube is one week.
26. The corpus luteum produces progesterone which primes the endometrium for implantation of the zygote.
27. Sperm mature while they are stored in the epididymis before ejaculation.

28. Both the penis and the clitoris consist of erectile tissue but only the clitoris contains the urethra.
29. The urethra of the male is about 8 inches long; whereas, the urethra of the female is one and one half inches long.
30. The internal sphincter of the male urethra is between the urinary bladder and the prostate; whereas, the internal sphincter of the female is only around the distal opening of the urethra.
31. Leaving the nephron, urine passes through the distal convoluted tubule to the collecting ducts to the calyces to the pelvis to the ureter.
32. 1,200 cc of blood through the kidneys each minute produce 125 cc of glomerular filtrate which eventually produces 1 cc of urine.
33. Hypothyroidism in the child is called cretinism; the same condition in the adult is called myxedema.
34. Portions of the gastrointestinal tract located near the left kidney are the splenic flexure of the colon, stomach, descending colon and jejunum.
35. The duodenum receives ducts from the liver and the pancreas.
36. Water, glucose, protein and vitamin C are all absorbed in the proximal convoluted tubule.
37. The storage form of the thyroid hormone is called thyroglobulin and the circulating form is called thyroxine which functions to increase the rate of cell metabolism.
38. Kidney stones are more likely to lodge in the junction between the ureter and the pelvis of the ureter; and between the bladder and the urethra.
39. The periodontal membrane, the gingiva and the enamel serve to secure the tooth in its bony socket.

40. The gall bladder is on the inferior surface of the left lobe of the liver.

Part II. Choose the correct answer.

41. The parotid gland's duct enter the mouth

- a. opposite the second lower molar
- b. in the floor of the mouth
- c. opposite the second upper molar
- d. in front of the first incisor

42. The arterial blood supply to the kidney is via the ____ artery.

- a. coeliac
- b. superior mesenteric
- c. inferior mesenteric
- d. renal

43. Which is not a function of the liver?

- a. forms bile
- b. produces pepsin
- c. destroys RBC
- d. stores glycogen

44. The function of insulin is to

- a. lower blood sugar
- b. raise blood sugar
- c. emulsify fats
- d. break down amino acids

45. Which is not a major function of the large intestine?

- a. absorb water
- b. form feces
- c. produce mucus
- d. absorb proteins

46. In the kidney the blood from the afferent arteriole empties directly into the

- a. aorta
- b. renal artery
- c. glomerulus
- d. efferent arteriole

47. Which is not part of the large intestine?
- a. cecum
 - b. ileum
 - c. colon
 - d. rectum
48. The head of the pancreas lies near the _____ of the small intestine.
- a. duodenum
 - b. jejunum
 - c. cecum
 - d. appendix
49. Which is not a specific digestive function of the tongue?
- a. mixing food with saliva
 - b. swallowing
 - c. talking
 - d. keeping the food between the teeth
50. The tail of the pancreas reaches to the
- a. spleen
 - b. right kidney
 - c. right adrenal
 - d. liver
51. Which is not a content of the femoral triangle?
- a. sciatic nerve
 - b. femoral nerve
 - c. femoral artery
 - d. femoral vein
52. Diabetes insipidus can be caused by damage to the
- a. thalamus
 - b. epithalamus
 - c. hypothalamus
 - d. anterior pituitary
53. The lining of the esophagus is _____ epithelium.
- a. simple squamous
 - b. stratified squamous
 - c. simple columnar
 - d. stratified columnar, ciliated, with goblet cells

54. The parietal cells in the gastric mucosa are responsible for the formation of
- pepsin
 - mucus
 - HCl
 - NaCl
55. The ureters enter the urinary bladder on its _____ surface
- anterior-inferior
 - superior-anterior
 - posterior-inferior
 - posterior-superior
56. Where are macrophages not found?
- lung
 - liver
 - brain
 - epidermis
57. The epithelium of the seminiferous tubules produces
- glial cells
 - goblet cells
 - epididymal cells
 - sperm
58. The average number of ova produced by the human female during her reproductive years is
- one million
 - 200+
 - 400+
 - 50,000
59. The average number of sperm per ejaculation in the human male is
- one to two hundred million
 - 50
 - one billion
 - 400+

60. The vas deferens enters the urethra
- at the level of the urogenital diaphragm
 - through the prostrate gland
 - within bulbo-urethral glands
 - through the prostate gland
61. The vas deferens enters the abdominal wall through the inguinal canal to join the _____ to form the ejaculatory duct.
- bile duct
 - duct from the seminiferous tubules
 - duct from the seminal vesicles
 - prostatic duct
62. The two cranial nerves that control the muscles in the middle ear are
- II and III
 - III and IV
 - V and VII
 - VIII and IX
63. The receptors for kinetic equilibrium in the inner ear are found in the
- maculae
 - cristae
 - organ of Corti
 - cerumen
64. The receptors for hearing in the cochlea are found in the
- maculae
 - cristae
 - organ of Corti
 - perilymph
65. The epidermis has no
- germinal cells
 - melanocytes
 - blood vessels
 - strata

66. The oil on the skin is produced by
- sweat glands
 - sebaceous glands
 - mucous cells
 - none of the above
67. Which is not a function of the skin?
- heat conservation
 - excretory organ
 - protection
 - secretes melatonin
68. Finger nail keratin has more _____ making them more resistant and stable than epidermis keratin.
- calcium
 - sulfur
 - protein
 - collagen
69. The left kidney is between
- T12- L3
 - T9 - L1
 - L1 - L5
 - L2 - L3
70. Fluid loss through the skin is minimal due to the presence of
- melanin
 - sebaceous glands
 - keratinization and cornification
 - sudoriferous glands

This time I will combine two of my favorites:

1. LOVE CONQUERS ALL
2. THE GREATEST REWARDS COME FROM THE GREATEST COMMITMENTS ---- IN FRIENDSHIP AND SCHOLARSHIP.