

KEY

INTEGRATIVE BIOLOGY 131
EXAMINATION III
DECEMBER 10, 2003

PLEASE MARK THE BEST ANSWER

1. Most of the uterus consists of
 - a. myometrium
 - b. endometrium
 - c. ectometrium
 - d. serometrium

2. The innermost layer of the uterus is called
 - a. myometrium
 - b. endometrium
 - c. ectometrium
 - d. serometrium

3. Which is not a component of the vulva?
 - a. labia majora
 - b. clitoris
 - c. labia minora
 - d. anus

4. The site where fertilization normally occurs
 - a. is about one-third the way down the uterine (Fallopian) tube
 - b. the uterine wall, somewhere in the fundus
 - c. the cervix of the uterus
 - d. the vagina

5. The vagina
 - a. is the anterior part of the uterus, sometimes called the cervix
 - b. is a thin-walled tube whose external opening lies between two folds of skin, the labia minor
 - c. is the site of the growth of the fetus; it is also called the womb
 - d. has its inner mucosa sloughed off each month as the menstrual flow

6. The cristae, which help maintain kinetic equilibrium, constitute the receptors for the
 - a. cochlea
 - b. semicircular canals
 - c. vestibule
 - d. macula

7. The muscles which modify bone vibration in the middle ear are the
 - a. tensor malleolus and stapedius
 - b. tensor tympani and stapedius
 - c. incus and stapes
 - d. malleolus and tympani

8. The fluid motion within the scala tympani causes vibration of the _____ upon which sits the Organ of Corti.
- tectorial membrane
 - membrane of oval window
 - basilar membrane
 - tympanic membrane
9. Mechanical stimulation of the hair cells in the Organ of Corti is transmitted by electrical impulses via dendrites to the
- supporting cells
 - spiral ganglion in the bony pillar (modiolus) of the cochlea
 - scala vestibuli
 - scala tympani
10. The inner ear is found in the _____ of the temporal bone
- mastoid portion
 - squamous portion
 - zygomatic process
 - petrous portion
11. Receptors including hair cells, otoliths, gelatinous covering, static equilibrium, 3 D position in space are all concerned with
- cristae
 - maculae
 - Organ of Corti
 - none of the above
12. What structure is not a main factor in supporting the tooth in its bony socket?
- enamel
 - gingiva
 - cementum
 - periodontal membrane
13. What structure is not part of the mucosa of the digestive system?
- epithelium
 - cartilage
 - smooth muscle
 - glands
14. What fact is not true for the esophagus?
- it is anterior to the vertebral bodies
 - the presence of HCl causes "heart burn"
 - it connects the laryngeal pharynx to the stomach
 - the upper third of the muscularis is only smooth muscle
15. What substance is not normally found in chyme?
- protein digestive enzymes
 - mucus
 - HCl
 - bile

16. The stomach is found _____ of the abdominal cavity
- in the middle
 - mostly to the left of the midline
 - mostly to the right of the midline
 - in the left lower quadrant
17. What is not true about the muscularis of the stomach?
- it has three layers of muscle to create a churning motion
 - it is found in the fundus of the stomach
 - it is found in the body of the stomach
 - its oblique layer is skeletal muscle
18. A specific characteristic of the lining of the duodenal wall is that
- parietal cells are present to inhibit the action of HCl
 - Brunner's glands exist to neutralize the acid in chyme entering from the stomach
 - the epithelium has no microvilli upon the macrovilli to aid with the absorption of Calcium
 - the crypts of Lieberkuhn are missing
19. The distance from the pyloric sphincter to the ileocecal valve is about _____ feet in length.
- 3
 - 20-21
 - 5
 - 15
20. The large intestine is about _____ feet in length.
- 10
 - 20
 - 30
 - 4.5
21. What is not a function of the large intestine?
- it produces bile
 - it receives unabsorbed and undigested food
 - it actively absorbs water
 - it produces a good deal of mucus to lubricate the feces
22. Cancer is most prevalent in which part of the colon?
- transverse
 - ascending
 - descending
 - sigmoid
23. Feces are stored in which part of the colon.
- ascending
 - transverse
 - descending
 - sigmoid
24. McBurney's point which designates the location of the appendix is found between the
- umbilicus and the left nipple
 - umbilicus and the right anterior iliac spine
 - umbilicus and the left anterior iliac spine
 - anterior iliac spine and the pubic tubercle

25. What is true about the muscularis of the large intestine?
- it has three complete layers of smooth muscle to aid with the efficient passage of the feces
 - it has two inner circular layers of smooth muscle
 - it has three outer bands of longitudinal smooth muscle called taenia coli
 - like the stomach its inner layer is oblique to "churn" the contents of the colon
26. The second largest gland in the body has an endocrine portion which does not secrete
- amylase
 - insulin
 - glucagon
 - somatostatin
27. Which is not a function of hepatocytes?
- destruction of old RBCs
 - production of clotting agents such as prothrombin and fibrinogen
 - storage of vitamins A, C, E, B12 and K
 - produces 500-1000 cc of bile each 24 hours
28. The secretory portion of the kidney does not include which of the following
- loop of Henle
 - distal convoluted tubule
 - Bowman's capsule
 - pyramids
29. The renal corpuscle includes
- proximal convoluted tubule
 - glomerulus and Bowman's capsule
 - calyces
 - collecting ducts
30. Which is not reabsorbed in the proximal convoluted tubule?
- antidiuretic hormone
 - glucose
 - vitamin C
 - amino acids
31. A lack of antidiuretic hormone from the posterior pituitary causes
- diabetes mellitus
 - glomerular nephritis
 - diabetes insipidus
 - polyneuritis
32. Glomerular filtrate does not pass through the
- the podocytes (visceral layer) of Bowman's capsule
 - proximal convoluted tubule
 - parietal layer of Bowman's capsule
 - loop of Henle
33. How much glomerular filtrate passes through the kidney each minute to produce one cc of urine?
- 20 cc
 - 40 cc
 - 10 cc
 - 125 cc

34. Where is most of the glomerular filtrate reabsorbed?
- distal convoluted tubule
 - ascending loop of Henle
 - Bowman's capsule
 - proximal convoluted tubule
35. The glomerulus receives arterial blood directly from the
- efferent arteriole
 - renal artery
 - afferent arteriole
 - arcuate artery
36. When removing the uterus (hysterectomy), one must be careful not to injure the _____ which are directly anterior to the uterus.
- urinary bladder
 - ureters entering the bladder
 - clitoris
 - mons pubis
37. The receptors which indicate when to urinate in the urinary bladder are
- free nerve endings
 - maculae
 - cristae
 - stretch receptors
38. The urogenital diaphragm is made of
- smooth muscle
 - skeletal muscle
 - elastic fibers
 - only collagenous fibers
39. One hormone which controls the metabolic rate of tissues in the body and the development of the nervous system is called
- melatonin
 - parathormone
 - triiodothyronine
 - colloid
40. Myxedema is the term defining the condition due to
- hyperactivity of the adrenal cortex in adults
 - hypoactivity of insulin in children
 - too much aldosterone
 - inactivity of the thyroid gland in adults
41. Stem cells for sperm in the _____ migrate into embryonic testes
- ectoderm
 - endoderm
 - yolk sac
 - mesoderm

42. Sperm are formed in the
- scrotum
 - interstitial cells
 - Sertoli cells
 - seminiferous tubules
43. The acrosome of the sperm contains
- mitochondria to provide energy for locomotion
 - enzymes to allow penetration into ovum
 - testosterone
 - growth factors for seminal vesicles
44. Which function is not associated with the epididymis?
- stores sperm
 - nourishes sperm
 - allows maturation of sperm
 - provides acid medium to activate sperm
45. Which answer is not appropriate for the seminal vesicles?
- most common site of cancer in males over 70
 - provide 60% of semen, an amount more than that produced by the prostate
 - produces an alkaline secretion
 - produces fructose to nourish sperm
46. Which is not true for the bulbourethral glands?
- lie in the urogenital diaphragm
 - neutralize acid in the urethra
 - are walnut size
 - lubricate urethra for passage of sperm
47. Which is not true of the ejaculatory duct?
- enters prostatic urethra
 - forms from the meeting of the vas deferens and the duct from the seminal vesicle on the posterior surface of the urinary bladder
 - adds an acid secretion to the semen to activate the sperm
 - none of the above
48. What is not true about erection?
- arterial blood enters the cavernous sinuses of the penis to bring about erection
 - about 50 cc of blood enters in (a)
 - arterial pressure on veins prevents venous drainage
 - venous blood enters cavernous sinuses of the penis to bring about erection
49. Each (one) ejaculation of semen consists of about _____ sperm and secretions from the prostate, seminal vesicles, and bulbourethral glands.
- 100 million
 - 50 million
 - 1 billion
 - 200 million.
50. The female ovulates about _____ ova during her entire reproductive period. NOTHING IS TOO LATE!
- 1,000
 - 1,000,000
 - 420
 - 50,000