Name: ________________________________

Instructions
This exam consists of 40 questions. You may write on the exam itself, but be sure to answer all your
questions on a “Scantron” sheet with a #2 pencil. For each question there is one response that is the best
response. You must select the one best response to receive credit for each question.

Read all responses for a question before selecting your answer! I recommend that you first write your
answers on the exam itself, then fill in the answers on the answer sheet. If you fill in a response on the
answer sheet and wish to change your response, then be sure to completely erase the errant response.

Be sure to write your name on this exam booklet and on the answer sheet. Turn in both the exam
booklet and answer sheet as you leave the testing center. If you believe that a question is written
incorrectly, then attach a note to the front of this exam.
1. Which structure is a gonad?
   a. ductus deferens
   b. scrotum
   c. prostate gland
   d. testes
   e. More than one of the responses above is correct.

2. What structure encloses the ductus deferens, testicular artery and vein, and nerves as they pass through the inguinal canal?
   a. seminal vesicle
   b. spermatic cord
   c. rete testes
   d. seminiferous tubule
   e. None of the responses above is correct.

3. Interstitial cells in the male gonads produce
   a. LH.
   b. FSH.
   c. gonadotropin releasing hormone.
   d. testosterone.
   e. progesterone.

4. In a man who has NOT been circumcised,
   a. the distal portion of the corpus spongiosum has been removed.
   b. the prepuce covers the corpus cavernosum.
   c. the foreskin covers the glans.
   d. All of the responses above are correct.
   e. None of the responses above is correct.

5. Contraction of the cremaster muscles causes the ____________ to move closer to the ______________.
   a. prepuce; glans
   b. prostate; bladder
   c. corpus spongiosum; corpora cavernosa
   d. testes; inguinal canals
   e. external urethral sphincter; internal urethral sphincter
6. Through which structure does the urethra pass in a man?
   a. corpora cavernosa
   b. corpus spongiosum
   c. seminal vesicle
   d. prostate gland
   e. More than one of the responses above is correct.

7. Seminal plasmin is produced by the
   a. bulbourethral gland.
   b. epididymis.
   c. prostate gland.
   d. seminal vesicles.
   e. seminiferous tubules.

8. Semen contains __________, which forms a temporary clot in the vagina.
   a. fibrinogen
   b. fructose
   c. human chorionic gonadotropin
   d. prostaglandins
   e. seminal plasmin

9. Erection of the penis requires all of the following EXCEPT FOR
   a. contractions of smooth muscle in the ductus deferens.
   b. nitric oxide.
   c. the parasympathetic nervous system.
   d. the corpus spongiosum.
   e. the corpora cavernosa.

10. In males, gonadotropin releasing hormone (GnRH) stimulates the pituitary to release
    a. inhibin
    b. LH
    c. testosterone
    d. estrogen
    e. More than one of the responses above is correct.
11. Which hormone is most directly responsible for stimulating the development of sperm?
   a. FSH  
   b. LH  
   c. testosterone  
   d. progesterone

12. Which cell is diploid?
   a. primary spermatocyte  
   b. secondary spermatocyte  
   c. spermatid  
   d. spermatozoa  
   e. More than one of the responses above is correct.

13. Rising levels of _____________ directly slow the production of FSH by the male pituitary gland.
   a. LH  
   b. inhibin  
   c. testosterone  
   d. estrogen

14. Each ovary is attached to the uterus by
   a. fimbriae.  
   b. a suspensory ligament.  
   c. an ovarian ligament.  
   d. an ovarian artery.  
   e. a ligamentum ductosum.

15. The ovaries of a five-year-old girl contain
   a. primary oocytes.  
   b. secondary oocytes.  
   c. ova. (this is the plural of “ovum”)  
   d. corpus luteum.  
   e. More than one of the responses above is correct.
16. The ovaries of a five-year-old girl contain
   a. primordial follicles.
   b. primary follicles.
   c. secondary follicles.
   d. corpus luteum.
   e. More than one of the responses above is correct.

17. If the internal os were blocked, then a sperm could NOT get to the
   a. cervical canal.
   b. external os.
   c. fornix.
   d. uterine tube.
   e. More than one of the responses above is correct.

18. If the bacteria that normally live in the vagina are killed off, then
   a. the pH of the vagina increases.
   b. the pH of the vagina decreases.
   c. the pH of the vagina should not change significantly.

19. Formation of a ______________ requires the completion of meiosis I.
   a. oogonium
   b. primary oocyte
   c. secondary oocyte
   d. All of the responses above are correct.
   e. None of the responses above is correct.

20. A secondary follicle contains a ____________ oocyte.
   a. primordial
   b. primary
   c. secondary
   d. Graafian
21. Which one of the following structures is **NOT** part of the vulva?
   a. mons pubis
   b. labia majora
   c. labia minora
   d. fornix
   e. vestibule

22. Which one of the following structures of a mammary gland contains all of the others?
   a. alveolus
   b. lobe
   c. lobule
   d. lactiferous ducts

23. Which type of cell would **NOT** have ever been present in a 30-year-old woman who has never had sexual intercourse?
   a. oogonia
   b. primary oocyte
   c. secondary oocyte
   d. ovum

24. During the menstrual phase of the uterine cycle
   a. the stratum basalis of the endometrium degenerates and is shed.
   b. the stratum functionalis of the endometrium degenerates and is shed.
   c. the level of progesterone in the body rises to its peak.
   d. the level of FSH decreases.
   e. the stratum functionalis produces large amounts of glycogen.

25. If an egg is **NOT** fertilized shortly after ovulation, then during the last week of the menstrual cycle
   a. the level of progesterone rises dramatically.
   b. the level of estrogen rises dramatically.
   c. the level of LH rises dramatically.
   d. All of the responses above are correct.
   e. None of the responses above is correct.
26. The ovary of a female and the testes of a male are more-or-less equivalent structures. In a similar manner, the ________ of a female is more-or-less equivalent to the penis of a male.
   a. fornix
   b. cervix
   c. clitoris
   d. mons pubis
   e. vestibule

27. Which one of the following proteins is normally found in both blood and semen?
   a. hemoglobin
   b. collagen
   c. transport globulin
   d. secretin
   e. fibrinogen

28. After having sex a couple of times with Sam, Sara developed a case of the sexually transmitted disease, gonorrhea. Shortly after contracting the disease, the number of _______ in Sara’s blood increased. Even under normal circumstances, this type of leukocyte is the most numerous in the blood.
   a. eosinophils
   b. basophils
   c. lymphocytes
   d. monocytes
   e. neutrophils

29. William is looking at a pretty girl in the class, and his sympathetic nervous system is causing an increase in William’s cardiac output. Which of the following specific effects is caused by the cardioacceleratory center?
   a. increased heart rate only
   b. increased stroke volume only
   c. increased heart rate and increased stroke volume
   d. erection of the penis

30. After an erythrocyte passes through the penis, which heart valve will it pass through first?
   a. aortic semilunar valve
   b. bicuspid valve
   c. pulmonary semilunar valve
   d. tricuspid valve
31. Blood pressure in the ovarian artery is normally _____________ blood pressure in the ovarian vein.
   a. greater than
   b. less than
   c. equal to
   d. There has not been enough information given to determine how the pressures compare.

32. During sexual intercourse, a person’s blood pressure tends to increase. This rise in blood pressure is due to which of the following factors?
   a. increased cardiac output
   b. increased total peripheral resistance
   c. decreased total peripheral resistance
   d. Responses “a” and “b” are both correct.
   e. Responses “a” and “c” are both correct.

33. Blockage of lymph nodes can cause edema in certain areas of the body. For example, blockage of the lymph nodes in the ___________ region may cause edema (and considerable enlargement) of the scrotum.
   a. axillary
   b. brachial
   c. cervical
   d. inguinal
   e. ovarian

34. Which one of the following defenses is a non-specific defense against the herpes virus?
   a. antibody molecule
   b. cytotoxic T cell
   c. CD4 lymphocyte
   d. the skin
   e. None of the responses above is correct.

35. The human immunodeficiency virus (HIV) generally infects people as a result of sexual activity. Once inside a person’s body, HIV invades CD4 lymphocytes. The CD4 cells are also known as
   a. helper T cells.
   b. cytotoxic T cells.
   c. natural killer cells.
   d. polymorphonuclear leukocytes.
36. During sexual intercourse, a person’s respiratory rate typically increases, and the volume of air moved into and out of the lungs also increases. The volume of air inspired into the lungs is increased by contraction of the
a. external intercostal muscles.
  b. internal intercostal muscles.
  c. abdominal muscles.
  d. Responses “a” and “c” are both correct.
  e. Responses “b” and “c” are both correct.

37. If a person’s respiratory rate increases too much (the person is hyperventilating), then what is most likely to happen to the pH of the person’s blood?
  a. The pH will increase.
  b. The pH will decrease.
  c. The pH should not change.

38. William just gave his girlfriend a box of chocolates. It seems that she was hungry, because she ate all of the chocolates at once! As the chocolates are digested and the sugar is absorbed into the bloodstream, which of the following statements is most likely true?
  a. The amount of insulin in the blood rises, and the liver is stimulated to absorb glucose from the blood.
  b. The amount of insulin in the blood rises, and glucose is released from the skeletal muscles.
  c. The amount of glucagon in the blood rises, and the liver absorbs glucose from the blood.
  d. The amount of glucagon in the blood rises, and glucose is released from the skeletal muscles.

39. Which of the following structures is used by both the urinary and reproductive systems in a man?
  a. external urethral orifice
  b. ductus deferens
  c. epididymis
  d. urinary bladder
  e. ureter

40. Although Sara should have dumped Sam a long time ago for giving her gonorrhea, she just hooked up with him again, and they had sex for three straight hours. Sara is now dehydrated and thirsty. Which one of the following statements is most likely true about Sara?
  a. Levels of ADH are high, and her collecting ducts are very permeable to water.
  b. Levels of ADH are high, and her collecting ducts are rather impermeable to water.
  c. Levels of ADH are low, and her collecting ducts are very permeable to water.
  d. Levels of ADH are low, and her collecting ducts are rather impermeable to water.