

NOTES: Excretory & Reproductive Systems

Objectives

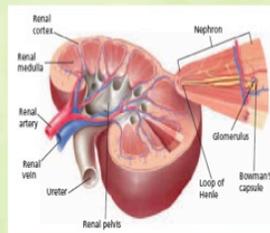
- * _____
- * _____
- * _____
- * _____

Urinary System

- * When the villi in the small intestine absorb nutrients they also absorb water and liquid waste into the blood.
- * The blood is then filtered by the _____ where the waste is taken out.
- * The process of removing the wastes from the blood is called _____

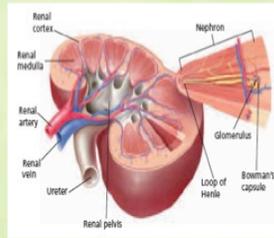
The Kidney

- * The _____ brings blood to the kidney.
- * The blood enters the _____
- * It then moves through the _____ which contains many capillaries.



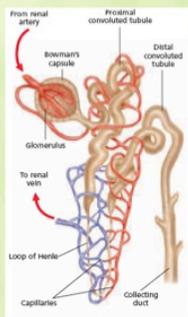
The Kidney (Cont...)

- ✦ The blood finally reaches the outer most part of the kidney, called the _____
- ✦ The renal cortex houses the openings to the _____ which are the functional unit of the kidney.



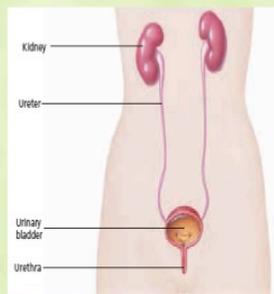
Nephrons

- ✦ Blood enters the nephron in the renal cortex in the _____
- ✦ It then flows through a series of capillaries and collecting ducts in the _____ located in the renal medulla.
- ✦ Filtered blood leaves through the _____ and the waste goes to the _____



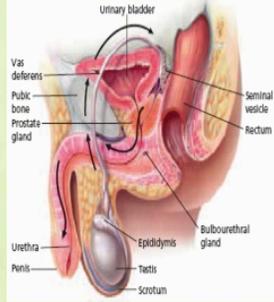
Excretion

- ✦ The ureter leads the newly formed _____ to the _____
- ✦ The urinary bladder holds the urine until it can be expelled through the _____ and out of the body.



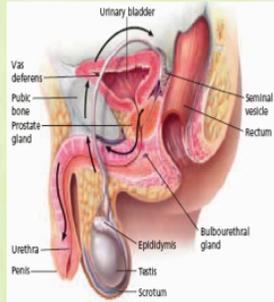
Male Reproductive System

- * The male gamete, _____, is produced in the _____ which are located in the _____.
- * The sperm is then moved to the _____ where it matures.
- * The _____ is the tube that conducts the sperm to the urethra.



Male Reproductive System

- * _____ produce the liquid medium for the sperm to travel in and the _____ produces a liquid that neutralizes the acids in the female R.S.
- * The _____ produces a fluid that neutralizes the acidic urine in the urethra.
- * The sperm and other fluids (now called **semen**) enter the urethra which travels through the _____ where it is then released, or _____.



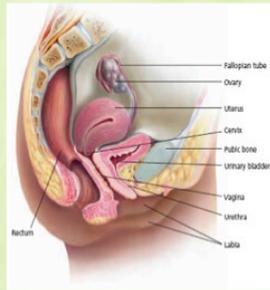
Female Reproductive System

- * The female gametes, or _____, are produced in the _____.
- * Mature eggs are released into the abdominal cavity through _____ which lead to the _____.
- * The inferior opening to the uterus is called the _____.



Female Reproductive System

- * The cervix opens into the _____
- * The urethra runs through the vagina.
- * The exterior opening of the vagina is protected by two bi-lateral _____
- * All of the external structures of the female R.S. are referred to as the _____



Sexual Reproduction

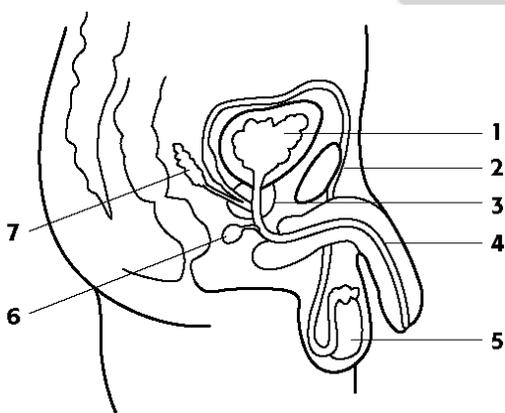
- * When a male ejaculates he releases hundreds of millions of sperm.
- * The sperm travel through the female reproductive tract in hopes of finding an egg to fertilize in the fallopian tubes.
- * When sperm fuses with an egg it creates a _____
- * Both the sperm and the egg are _____ cells which mean that have half of the chromosomes as regular cells.
- * When combined they form a _____ that has the correct number of chromosomes.

Development/Pregnancy

- * The zygote forms into a _____ which implants to the wall of the uterus.
- * There it forms a protective barrier called the _____
- * At the point of fusion, the mother produces a _____
- * The placenta absorbs nutrients and passes them to the offspring through the _____

Part V: Excretory & Reproductive System

- _____ 1. Urea is formed in the
- cells.
 - lungs.
 - kidneys.
 - liver.
- _____ 2. The kidneys play a major role in maintaining
- the proper breathing rate.
 - the proper glucose levels in the blood.
 - homeostasis by removing urea, water, and other wastes from the blood.
 - the concentration of digestive enzymes in the blood.
- _____ 3. The basic functional unit of the kidney is the
- villus.
 - nephron.
 - ureter.
 - urethra.
- _____ 4. Urine, when compared with the initial filtrate, contains
- more glucose.
 - less water, fewer minerals, and more urea.
 - decomposed red blood cells.
 - concentrated amino acids.
- _____ 5. Ammonia is converted to urea because
- urea is less toxic to the body.
 - urea can be converted to a nutrient.
 - the nitrogenous wastes in urea can be recycled and do not need to be excreted.
 - All of the above
- _____ 6. The first stage of urine formation is called
- filtration.
 - bladder inflation.
 - reabsorption.
 - nephrosis.
- _____ 7. Which of the following filtrates is *not* reabsorbed in significant quantities back into the bloodstream by the nephrons?
- glucose
 - ions
 - urea
 - water
- _____ 8. Urine leaves the body through the
- ureter.
 - urethra.
 - bladder.
 - intestine.
- _____ 9. ureter : urinary bladder ::
- urinary bladder : ureter
 - urethra : urinary bladder
 - urinary bladder : urethra
 - Loop of Henle : vena cava
- _____ 10. A sperm cell consists of a tail used for locomotion, a midpiece containing mitochondria, and a head that contains
- semen.
 - RNA.
 - DNA.
 - mucus.
11. Refer to the illustration above. Label the all the parts:



- _____
- _____
- _____
- _____
- _____
- _____
- _____

___ 12. The testes

- a. produce sperm.
- b. produce male hormones.
- c. are suspended in the scrotum.
- d. All of the above

___ 13. Production of sperm is regulated by luteinizing hormone (LH) and follicle-stimulating hormone (FSH), which are produced by

- a. the testes.
- b. the hypothalamus.
- c. the bulbourethral gland.
- d. the pituitary gland.

___ 14. ovary : egg production ::

- a. seminal vesicle : sperm production
- b. female reproductive system : sperm production
- c. testes : sperm production
- d. ovary : fertilization

___ 15. The process by which sperm leave the male's body is called

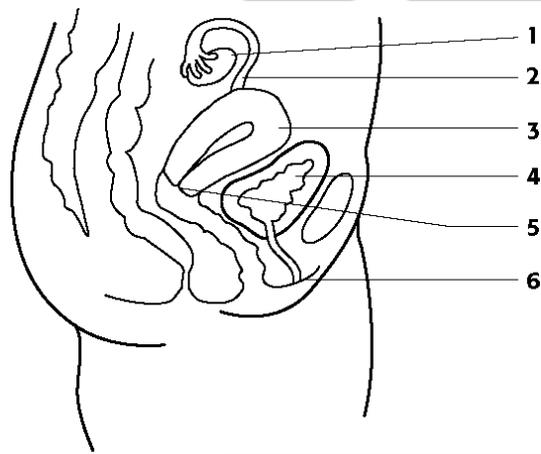
- a. secretion.
- b. ejaculation.
- c. diffusion.
- d. locomotion.

___ 16. The muscular structure in which the fetus develops is the

- a. vagina.
- b. fallopian tube.
- c. cervix.
- d. uterus.

___ 17. The fallopian tubes

- a. secrete estrogen.
- b. produce eggs.
- c. extend from the ovaries to each side of the uterus.
- d. All of the above



18. Refer to the illustration above. Label all the parts:

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

___ 19. The entrance to the uterus is called the

- a. vagina.
- b. vulva.
- c. cervix.
- d. diaphragm.

___ 20. Refer to the illustration to the right. The structure labeled "1" is

- a. a follicle.
- b. a corpus luteum.
- c. the uterus.
- d. an ovary.

___ 21. Refer to the illustration to the right. The structure labeled "2" is

- a. a sperm cell.
- b. a follicle.
- c. an egg cell.
- d. the cervix.

___ 22. Refer to the illustration to the right. The structure labeled "3" is

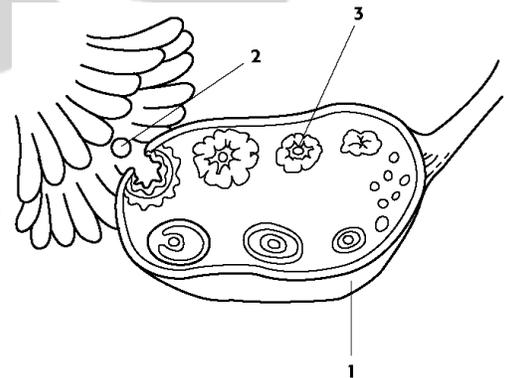
- a. an immature follicle.
- b. a corpus luteum.
- c. a blastocyst.
- d. an immature egg.

___ 23. Sperm and eggs are both

- a. haploid.
- b. diploid.
- c. tetraploid.
- d. None of the above

___ 24. The gamete produced by the female reproductive system is called a(n)

- a. sperm.
- b. ovum.
- c. ovary.
- d. follicle.



- _____ 25. Eggs are produced in the
- a. ovaries.
 - b. fallopian tubes.
 - c. uterus.
 - d. vagina.
- _____ 26. The ruptured follicle left in the ovary after ovulation develops into a
- a. corpus luteum.
 - b. zygote.
 - c. chorion.
 - d. cervix.
- _____ 27. Menopause is when
- a. adult sex characteristics first appear.
 - b. eggs are produced.
 - c. menstruation begins.
 - d. the ovaries stop releasing eggs.
- _____ 28. During implantation,
- a. the follicle matures.
 - b. the embryo attaches itself to the uterine wall.
 - c. the sperm reaches the egg.
 - d. menstruation occurs.
- _____ 29. A fertilized egg becomes an embryo
- a. in the ovary.
 - b. during the third trimester of pregnancy.
 - c. when fertilization occurs.
 - d. when the fertilized egg divides.
- _____ 30. The structure that exchanges substances between the mother and the fetus is called the
- a. yolk sac.
 - b. fallopian tube.
 - c. placenta.
 - d. mature follicle.
- _____ 31. During the fetal period,
- a. the mother's blood flows into the fetus through the umbilical cord.
 - b. the infant's lungs absorb oxygen from the amniotic fluid.
 - c. the fetus digests food independently of the mother.
 - d. nutrients, gases, and other substances pass from the mother to the fetus through the placenta.
32. Each kidney contains over 1 million functional units called _____.
33. Urine produced in the kidneys passes into the bladder through tubes called _____.
34. The testes are suspended in the _____.
35. In the testes, sperm are produced in tubes called _____.
36. The muscular opening at the lower end of the uterus is called the _____.
37. The release of an egg from an ovary is called _____.
38. The _____ cycle of the female is usually about 28 days long.
39. Menstrual flow consists of the lining of the _____.
40. The structure joining the ovary and the uterus is the _____, where fertilization takes place.
41. Following implantation, a membrane called the _____ encloses the embryo.
42. Nutrients, oxygen, and wastes including carbon dioxide are transferred between the mother and embryo through the _____.
43. Explain how the kidneys play a role in maintaining homeostasis in the body. Write your answer in the space below.

44. Describe the path of an unfertilized egg from the place where it is produced to the site where it leaves the body with menstrual flow. Write your answer in the space below.

45. What is the function of the placenta? Write your answer in the space below.

