Biology 122 Exam Review 5: Endocrine and Reproductive Systems

- 1. _____ are travelling chemicals that affect the function of various organs and cells.
- 2. _____ have special receptors on their cell membranes to which specific hormones can bind.
- 3. _____ are organs that secrete chemical substances into the body.
- 4. There are two types of glands: ______ glands, which secrete hormones via ducts, and ______ glands, which secrete hormones into the bloodstream.

5. There are two main groups of hormones: _____ and

- 6. Steroid hormones can pass directly through the cell membrane, and enter the nucleus where they control activation of genes.
- 7. Non-steroid hormones cannot cross the cell membrane and will generally bind to a receptor on the cell surface. This binding action activates a
- _____ messenger.
- 8. Local hormones, or _____, are not produced by glands, but by the cells themselves.
- 9. The ______ monitors blood chemistry and sends messages to the pituitary to signal an increase or decrease in hormone levels.
- 10. The ______ gland is known as the "master gland" because it regulates the functions of other glands.
- 11. The ______ gland produces thyroxine, which regulates metabolism,
- 12. The ______ produces insulin and glucagon which regulate the level of glucose in the blood.
- 13. The ______ glands produce adrenalin, which help the body respond to stress.
- 14. In males, the hormones _____ and ____ stimulate cells in the testes to produce _____.
- 15. The main function of the male reproductive system is to ______ and deliver ______.
- 16. The testes remain in the _____, where the lower body temperature allows proper development of sperm cells.
- 18. Sperm then move into the ______, where they fully mature and are stored.

- 19. From the epididymis, the sperm move into the ______, which is a tube that goes up into the body cavity and eventually merges with the ______.
- 20. The main function of the female reproductive system is to produce ______ and to nourish a developing embryo.
- 21. The hormones _____ and _____ stimulate the ovaries to produce
- 22. Each ovary contains thousands of _____ cells which help the egg to mature each month.
- 23. Females are born with many thousands of eggs, but only about _____ will actually have a chance to _____ and be released in her lifetime.
- 24. When the egg cell is ready, it is released from the ovary in a process called
- 25. The egg is then swept into the ______, where it may be fertilized if a sperm cell is present.
- 26. If fertilization does not occur, the egg cell ______ within 24 48 hours.
- 27. If fertilization does occur, the fertilized egg, now called a _____, makes it way to the _____ where it implants in the nutrient rich wall.
- 28. While still in the Fallopian tube, the zygote begins to undergo ______.
- 29. Four days after fertilization, the zygote is now called a _____, and is a solid ball of about 64 cells.
- 30. After a few more days, the morula becomes a hollow ball of cells, and it now called a ______, which is the structure which implants.
- 31. After implantation, the cell mass sorts itself into 3 layers during the process of _______ (innermost layer);
 - _____ (middle layer); and _____ (outer layer).
- 32. The ______ is the connective layer of tissue between the embryo and the mother, which allows exchange of nutrients and wastes.
- 33. After eight weeks of development, the embryo is now called a ______.
- 34. About 38 weeks after fertilization, the fetus is ready for _____
- 35. The hormone ______ is release from the mother's pituitary gland, and initiates strong contractions of the _____.
- 36. The opening of the mother's _____ dilates, and her "water breaks," releasing the _____ fluid.
- 37. Some prenatal tests include: _____

_____, and ______.