

**1. This gland secretes antidiuretic hormone (ADH) .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**2. This gland secretes insulin .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**3. Hormones from this gland help regulate metabolism of carbohydrates, lipids, and proteins .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**4. This gland secretes thyroid stimulating hormone (TSH) .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**5. This gland secretes Oxytocin (OT) .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**6. This gland secretes epinephrine and norepinephrine .....**

A	drenal gland	Anterior pituitary	Ovary	Pancreas
	Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
	Testis	Thyroid gland	Thymus	

**7. This gland helps regulates circadian rhythms, such as sleep-wake cycles, and seasonal cycles of fertility in many mammals .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**8. This gland secretes cortisol and aldosterone .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**9. This gland secretes Growth Hormone (GH) .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**10. Calcium level in the blood is regulated by the ..... and .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**11. The conversion of glycogen to glucose is stimulated by a hormone from the .....**

Adrenal gland	Anterior pituitary	Ovary	Pancreas
Parathyroid gland	Pineal gland	Pituitary gland	Posterior pituitary
Testis	Thyroid gland	Thymus	

**12. Which of the following an act as an antigen? [may be more than one]**

bacteria      parasites      toxin molecules      food molecules      part of a bacteria

**13. Fever .....**

**14. The spleen is a lymph organ that filters blood and also acts as a reservoir for .....**

water      fat      interstitial fluid      blood      calcium

**15. The thymus produces a hormone, ..... that stimulates the maturation of lymphocytes.**

oxytocin      thymosin      thyrotropin      thyroxine      thyroglobulin

**16. Lymph enters a lymph node through ....., filters through the ....., and leaves through .....**

- A. efferent vessels, afferent vessels, sinuses
- B. sinuses, afferent vessels, efferent vessels
- C. afferent vessels, sinuses, efferent vessels
- D. afferent vessels, efferent vessels, sinuses

**17. Which of these is not a function of lymph nodes in an adult?**

- A. houses lymphocytes and macrophages
- B. filter lymph
- C. produce red blood cells
- D. site of proliferation of lymphocytes

**18. Why do tissues swell during inflammation?**

- A. Tissues swell during inflammation because of the volume of bacteria present in the wound.
- B. Tissues swell during inflammation because of the number of blood cells attacking the bacteria.
- C. Tissues swell during inflammation because the increased permeability of capillaries causes fluids to accumulate in the area.
- D. Tissues swell during inflammation only because of pus accumulation.

**19. What traits characterize antigens?**

**20. Which lymph nodes could not be palpated with the fingers even if there are swellings?**

- A. cervical
- B. axillary
- C. inguinal
- D. mesenteric

21. Which of the following is NOT a common method of stimulating hormone secretion from an endocrine cell?

- a) Signals from the nervous system
- b) Chemical changes in the blood
- c) Mechanical stretching of the endocrine cell
- d) Releasing hormones.
- e. Both Signals from the nervous system and Chemical changes in the blood

22. The amount of ADH that is secreted by the posterior pituitary glands varies with \_\_\_\_\_

- a) blood osmotic pressure.
- b) blood calcium levels.
- c) blood oxygen levels.
- d) blood glucose levels.
- e) All of these choices.

23. Which of the endocrine glands secretes hormones that regulate the basal metabolic rate (BMR)?

24. Compare and contrast the mechanisms of action of lipid-soluble versus water-soluble hormones.

**Solution:** Upon reaching their target cells, lipid-soluble hormones diffuse across the phospholipid bilayer of the target cell membrane and bind to receptors in the cytosol or nucleus. The activated receptor usually acts by turning transcription of genes either on or off, thus regulating synthesis of a protein. Water-soluble hormones bind to membrane receptors, which activate intracellular signaling pathways that lead to changes in the cell's metabolic activity .

25. Describe the locations of and relationships between the hypothalamus and pituitary gland.

**Solution:** The hypothalamus is the integrating center for much sensory input. It secretes releasing and inhibiting hormones which diffuse into the hypophyseal portal system to regulate secretion of all hormones from the anterior pituitary gland. The hypothalamus also contains receptors that monitor blood osmotic pressure and neural input from reproductive structures. Integration of this input leads to production of ADH and OT by neurosecretory cells of the hypothalamus. These hormones are then transported through the hypothalamohypophyseal tract to be secreted by exocytosis from the posterior pituitary gland in response to nerve impulses.

26. List the hormones secreted by cells in tissues and organs other than endocrine glands, and describe their functions.

27. The 2<sup>nd</sup> line of body defense includes which three mechanisms?

28. What disorder is related to hyposecretion of insulin? What are the three classic signs (symptoms) of this disorder?

29. What causes fever & how might it be beneficial?

30. What causes the accumulation of fluids in tissues and how does this fluid become lymph?

Tissue fluid originates from blood plasma and contains nutrients and gases, but lacks larger proteins. The accumulation of small proteins in the interstitial spaces causes a rising osmotic pressure of the tissue fluid, interfering with its normal return to the blood. Excess tissue fluid enters lymphatic capillaries and becomes lymph.

**Disclaimer:** These are some of the questions [MC and short answer type] for the students to have an understanding about the type of questions. Remember that you are responsible for all the material discussed in the class. Follow the study guide, posted lecture notes, your own study tools and text book to do well in the exam.