

Name: \_\_\_\_\_

Period: \_\_\_\_\_

## Unit 7: Endocrine System

### Test Review

1. State the general functions of the endocrine system.
  
2. Define the term hormone and describe how a hormone functions.
  
3. Identify the major endocrine glands in terms of location.
  - a. Pituitary:
  
  - b. Thyroid:
  
  - c. Adrenals:
  
  - d. Pancreas:
  
4. Identify the endocrine gland that produces the following hormones.
  - a. GH:
  
  - b. TSH:
  
  - c. ACTH:
  
  - d. Thyroxine:
  
  - e. Epinephrine (adrenaline)
  
  - f. Norepinephrine (noradrenaline)
  
  - g. Cortisol:
  
  - h. Glucagon:
  
  - i. Insulin:

5. Identify the functions of the following hormones.
  - a. GH:
  - b. TSH:
  - c. ACTH:
  - d. Thyroxine:
  - e. Epinephrine (adrenaline):
  - f. Norepinephrine (noradrenaline):
  - g. Cortisol:
  - h. Glucagon:
  - i. Insulin:
6. Describe the diseases or disorders from the endocrine system.
  - a. Acromegaly:
  - b. Cretinism:
  - c. Diabetes Mellitus:
  - d. Dwarfism:
  - e. Gigantism:
  - f. Hyperthyroidism:
  - g. Hypothyroidism:
  - h. Myxedema:

## Unit 7: Endocrine System

### Test Review - KEY

1. State the general functions of the endocrine system.  
The endocrine system is responsible for coordinating and regulating body cells, tissues, organs, and systems to maintain homeostasis by secreting chemicals known as hormones. Unlike the nervous system, the effects of the endocrine system are sustained for longer periods of time. The endocrine system works primarily on negative feedback mechanisms.
2. Define the term hormone and describe how a hormone functions.  
Hormones are chemical messengers released by one tissue (gland) and transported by the bloodstream to reach the target tissues. The target tissue is where the effect of the hormone is actually observed.
3. Identify the major endocrine glands in terms of location.
  - a. Pituitary: brain; attached to hypothalamus
  - b. Thyroid: just below the thyroid cartilage (Adam's apple) of the larynx
  - c. Adrenals: superior to each kidney
  - d. Pancreas: lies in the fold of the duodenum posterior to the stomach and the peritoneal membranes
4. Identify the endocrine gland that produces the following hormones.
  - a. GH: pituitary
  - b. TSH: pituitary
  - c. ACTH: pituitary
  - d. Thyroxine: thyroid
  - e. Epinephrine (adrenaline): adrenal
  - f. Norepinephrine (noradrenaline): adrenal
  - g. Cortisol: adrenal
  - h. Glucagon: pancreas
  - i. Insulin: pancreas

5. Identify the functions of the following hormones.
  - a. GH: stimulates cell growth by increasing protein synthesis
  - b. TSH: triggers the release of the thyroid hormones
  - c. ACTH: Stimulates the release of steroid hormones (glucocorticoids like cortisol) from the adrenal glands.
  - d. Thyroxine: acts to increase metabolism by improving energy utilization, oxygen consumption, growth and development
  - e. Epinephrine (adrenaline): helps us with our emergency and stress response
  - f. Norepinephrine (noradrenaline): helps us with our emergency and stress response
  - g. Cortisol: promote glucose and glycogen and synthesis in the liver in a process called gluconeogenesis to support the body cells with adequate glucose to produce ATP
  - h. Glucagon: increase blood sugar levels by stimulating the liver to convert glycogen to glucose and to form glucose from amino acids
  - i. Insulin: functions to decrease blood sugar levels by stimulate the liver to convert glucose to glycogen and to facilitate the diffusion of glucose into the body cells where it be used for energy or stored as lipids
6. Describe the diseases or disorders from the endocrine system.
  - a. Acromegaly: Acromegaly is a hypersecretion of the growth hormone during adulthood
  - b. Cretinism: Cretinism is the hyopsecretion of the thyroid hormones during infancy and childhood which results in low metabolism, retarded growth, and often mental retardation.
  - c. Diabetes Mellitus: Diabetes mellitus Is the inability of the body to regulate one's blood glucose level. Type 1 diabetes mellitus occurs when the body fails to produce sufficient insulin. Type 2 diabetes mellitus occurs when the body cells become resistant to the effects of insulin.
  - d. Dwarfism: Dwarfism is due to a hyopsecretion of the growth hormone during childhood resulting in a small person who has a body frame of normal proportions.
  - e. Gigantism: Gigantism is due to a hypersecretion of the growth hormone during childhood resulting in a person who grows to a very large size.

- f. Hyperthyroidism: Hyperthyroidism is due to the hypersecretion of the thyroid hormones.
- g. Hypothyroidism: Hypothyroidism is due to the hyposecretion of the thyroid hormones.
- h. Myxedema: adult form of hypothyroidism