**FORM- A** **Name: \_\_\_\_\_\_\_\_\_KEY**

Anatomy and Physiology 212: Quiz #1 **ON YOUR SCANTRON, PUT YOUR NAME AND TEST FORM LETTER ON FRONT!****Multiple Choice (2 pts each): Choose the one best answer for each question, use a pencil to mark answer on scantron (double check for smears).**

1) A \_\_\_\_\_\_\_hormone only exerts its effects on cells with receptors that are near its site of production, prostaglandins are a classic example.

a) Endocrine b) Autocrine c) Neurotransmitter **d) Paracrine**

2) True/False: Lipid soluble hormones such as thyroxine and estradiol typically use membrane receptors and second messengers to change the activity of the target cell.

a) True **b) False**

3) The binding of epinephrine to which of the following adrenergic receptors might lead to sexual impotence (dysfunction) in some persons by creating inhibitory post synaptic potentials (IPSPs)?

a) Beta-1 b) Beta-2 c) Beta-3 d) Alpha-1 **e) Alpha-2**

4) A water soluble hormone called \_\_\_\_\_\_is produced by the adrenal \_\_\_\_\_\_\_\_ and can also be used as a neurotransmitter to help you manage stress.

a) DHEA, Zona Fasciculata b) Aldosterone, Zona Glomerulosa

**c) Epinephrine, Medulla**  d) Acetylcholine, Cortex

e) Thyroxine, Colloid

5) Which type of diabetes would be associated with an absence of beta cells in pancreatic islets?

**a) Type 1 or IDDM** b) Type 2 or Non-IDDM c) Diabetes Insipidus d) Both A and B

6) True/False: Cortisol is a glucocorticoid produced in the zona glomerulosa of the adrenal medulla and it causes glycogen in the liver to be broken down to increase the blood glucose concentration during times of stress.

a) True **b) False Cortisol is produced in the zona fasciculate, not glomerulosa and in the cortex not medulla**

7) True/False: The receptor for the hormone insulin is a tyrosine kinase that signals a well-fed state by phosphorylating specific intracellular proteins in livers cells and adipocytes. This causes the cells to become ***much less permeable to the glucose*** that is located in the blood.

a) True **b) False**

8) If the axons running from the hypothalamus to the pituitary were cut, but the portal blood vessels remained intact, you would create large amounts of urine because you would stop releasing which of the following hormones?

a) Epinephrine  **b) Antidiuretic hormone**  c) Thyroxine d) Prostaglandin e) Insulin

9) Which of the following is NOT a tropic hormone produced by the anterior pituitary?

a) Adrenocorticotrophic hormone b) Prolactin

c) Thyroid stimulating hormone **d) Growth hormone releasing hormone (hypothalmus to portal circulation and into anterior pituitary)**

e) All of the above are tropic hormones of the anterior pituitary

10) Which hormone helps elevate the plasma calcium concentration in your blood?

a) Oxytocin b) Melatonin c) Serotonin

d) Dehydroepandrosterone **e) Parathyroid hormone**

2 points extra credit: Draw a Diagram On the Back of your scantron

How do we increase the temperature of the body?

Start at the hypothalamus and show all hormones, organs, steps needed to accomplish this.

**Sample answer:**

Hypothalamus detects low body temperature and responds by secreting Thyroid releasing hormone secreted into portal blood vessels

TRH arrives in anterior pituitary and leaves blood, causing Thyroid stimulating hormone to be secreted

TSH enters blood and travels to thyroid gland.

TSH causes follicles in thyroid gland to release Tri and Tetraiodothyoxine (T3/T4) to blood

*T3/T4 cause mitochondria in fat and muscle cells to use more ATP to make more heat🡪to that body temperature increases. Negative feedback: increased body temperature reduces TRH secretion from hypothalamus….etc.* ***SEE NOTES and READ BOOK***