**Belmont City College 2023** Name: …………………

**Year 12 ATAR Human Biology Unit 3 Task 2 Part A: Test – Endocrine System**

**Section One: Multiple Choice (10 marks)**

*(Note: do not write on this paper – a space for your answers is included on the answer booklet)*

1: One hormone molecule causes the manufacture or activation of thousands of enzyme molecules through the process of

1. negative feedback.
2. enzyme amplification.
3. hormone amplification.
4. hormone clearance.

2: Which of the following statements about ALL hormones is correct? They

1. change the functioning of cells by changing the type or amount of proteins made.
2. activate certain genes in the nucleus.
3. change the shape or structure of an enzyme.
4. change the rate of production of an enzyme.

3: Complete the following sentence by choosing the correct sequence of words.

*Once a hormone has produced the required effect, it needs to be broken down. This mostly occurs in the \_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_. This process is known as \_\_\_\_\_\_\_\_\_\_\_.*

* 1. target cells; liver; enzyme amplification
  2. kidney; liver; negative feedback
  3. target cells; kidney; hormone clearance
  4. kidney; liver; hormone clearance

4: When the hormone glucagon reaches a target cell, it attaches to a receptor protein. This causes a secondary messenger to be released which activates a specific enzyme in the cell.

Glucagon is a

1. water soluble steroid hormone.
2. lipid soluble steroid hormone.
3. water soluble protein hormone.
4. lipid soluble protein hormone.

5: The posterior pituitary gland secretes

(a) oxytocin.

(b) growth hormone.

(c) glucocorticoids.

(d) adrenocorticotrophic hormone.

6: The anterior pituitary gland produces and secretes all of the following hormones except for

1. growth hormone.
2. thyroid stimulating hormone.
3. prolactin.
4. antidiuretic hormone.

7: In a person with normal thyroid function, low levels of thyroxine in the blood would result in

* 1. increased metabolic rate and would involve feedback from the anterior pituitary.
  2. increased metabolic rate and would involve feedback from the posterior pituitary.
  3. decreased metabolic rate and would involve feedback from the anterior pituitary.
  4. decreased metabolic rate and would involve feedback from the posterior pituitary.

8: Glucocorticoids are secreted by the adrenal cortex. Which of the following is **not** an effect of glucocorticoids?

* 1. stimulate fat breakdown
  2. produce glucose from amino acids
  3. stimulate the release of insulin
  4. increase blood glucose levels

9: ACTH is a hormone secreted by

1. the hypothalamus and released from the anterior lobe of pituitary gland.
2. the posterior lobe of the pituitary gland and its release is controlled by the hypothalamus.
3. the anterior lobe of the pituitary gland and its release is controlled by the adrenal

cortex.

1. the anterior lobe of the pituitary gland and its release is controlled by the

hypothalamus.

10: The hormone responsible for stimulating the contractions of the uterus is

1. produced in and released from the anterior lobe of the pituitary.
2. produced in the hypothalamus and sent to the anterior lobe of the

pituitary via nerve fibres.

1. produced in the hypothalamus and sent to the posterior lobe of the

pituitary via nerve fibres.

1. secreted from the hypothalamus and sent to the posterior lobe of the

pituitary via blood vessels in the infundibulum.