Please write your name on the back of this page. Read the questions carefully.

1.) (2 pts) Define Hormone.

It is a substance produced by a ductless gland that is released into the blood system and has an effect locally or at a distance.

2.) (2 pts) Describe (using words) the relationship between carbohydrate content of a glycoprotein and its half-life in the blood.

The more carbohydrate bound to a protein the harder it is to break down the protein and therefore the longer the half-life in the body of the protein (Carbohydrate acts like suit of armor)

3.) (3 pts) Describe the physical relationship between the pituitary (both lobes) and the hypothalamus.

Pituitary sits ventrally to hypothalamus. Hypothalamus → Anterior Pituitary = hypothalamo-hypophyseal portal system used where hypothalamus releases Releasing Hormones that flow into the Anterior pituitary and ADH into Neurohypophysis, where they are stored from Hypothalamus cell bodies in

4.) (3 pts) List and describe 3 chemical classes of hormones made of amino acids.

Proteins = >50 Amino Acids (e.g. Prolactin)
Glycoproteins = Protein hormones bound to carbohydrates (e.g. LH, FSH, Oxytocin)
Peptides = Hormones less than 50 amino acids like

Bonus (2 pts):

What is the general name for the pituitary cell types that specifically secrete FSH and LH?

Adeno-hypophysial cells → some of these produce other hormones, gonadotropes

Name a non-pituitary source of the gonadotrophic hormones in the primate and the mare?

▲ Placenta