Endocrine system

Directions: In the space provided use standard English and grammatically correct sentences and paragraphs (unless otherwise noted) to respond to the statement or question. Note point values. IF YOUR CELL PHONE ACTIVATES THE AUDITORY SIGNAL, YOU WILL BE PENALIZED 10 POINTS!!!

1. Fill in the table—no sentences, identify only (10)

<table>
<thead>
<tr>
<th>Chemistry (1.5pt)</th>
<th>specific example (1pts)</th>
<th>soluble in ??? (1pt)</th>
<th>mech. of action (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>epinephrine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peptide/glycoprotein</td>
<td></td>
<td></td>
<td>Cytoplasmic receptor, R-H complex travel into nucleus and bind DNA</td>
</tr>
</tbody>
</table>

2. Johnny, a five year old boy, has been growing by leaps and bounds; his height is 100% above normal for his age. He has been complaining of headaches and “seeing double”. A) What hormone is being secreted in excess? B) What condition will result if corrective measures are not taken?—why that condition? C) Why the vision problems and headaches? (From M&H p 645) Each subpart can be answered in one or two sentences. (10 pts)

3. Describe the adrenal cortex and medulla with respect to classes of hormones and cell types. (10)
4. In general (without "gory" detail, but with some detail) describe the cyclic adenosine monophosphate mechanism of hormone activation. Illustrate your answer with a specific hormone (use one not provided by me on page 1! Or used in #4 on page 3). What are some important functions of your chosen hormone, where is it secreted from, and what are its target tissues? (15)

What happens to the cascade if an antiphosphodiesterase is added? Why? (5)
4. Choose a series of hormones to illustrate “hormonal” stimulation and the control of secretion in a male OR a female causing effects on reproductive ability. For each of these peptide hormones, tell where it is produced/secreted from, how it is delivered, what the targets are, and how the hormone functions. Do NOT use the same Hormone as used in #3 (20)
5. Use blood glucose as the signal for "humoral" stimulation of secretion. Choose a hormone and tell where it is produced/secreted from, where/what it targets, and how it functions—use a flow chart to decrease your time of writing. (10)

6. Identify each, note the physiological basis, the hormone(s)/secretion implicated, and tissue/cells of origin if applicable. (20)

   a) Cretinism

   b) Polyuria and polydipsia

   c) cyclooxygenase