**End of Topic Formative Assessment: Endocrine System**

This past exam question must be done closed-book. No study materials may be used and it must be completed under test conditions. **Time allowed: 20 minutes**

Name: ……………………………………………………………….. Mark /20

*From the 2020 ATAR Paper*  
*Question 40*

1. Human Growth Hormone (hGH) is released from the pituitary gland. State from which lobe of the pituitary this hormone is secreted and explain the relationship between this section of the pituitary gland and the hypothalamus. (6 marks)

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

1. hGH is a water-soluble hormone. Explain how hGH enters and affects the functioning of its target cell. (6 marks)

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

1. Dwarfism can be treated using synthetically produced hGH. Explain how hGH could be produced using recombinant DNA technology. (8 marks)

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

……………………………………………………………………………………………………………………………..

**END OF FORMATIVE ASSESSMENT TASK**