**Year 12 ATAR Human Biology ATHBY**

**Task 4: Extended Response**

**Conditions**

Time for task:

**Part A**: You have one week to research the topic and complete notes. You **may not** use these notes for Part B.

**Part B**: 30 minutes for in class validation – examination-style extended answer question.

**Task weighting: 6%**

**Part B: In-class assessment 20 marks**

Answer each part of the following question on the lined paper provided.

Responses could include clearly labelled tables and graphs, clearly labelled diagrams with explanatory notes, lists of points with linking sentences and annotated flow diagrams with introductory notes.

Amy was a fit active young female who noticed she was feeling tired all the time and was finding it difficult to carry out her daily activities. When Amy reflected on how she was feeling she realised that it had been occurring for some months. When she visited her doctor, who took some blood tests, Amy was diagnosed with hypothyroidism.

1. The pituitary gland is referred to as the ‘master gland’ of the endocrine system. Describe how Amy’s pituitary gland would have worked with her thyroid gland when Amy was fit and well.

(6 marks)

1. What are the likely causes of hypothyroidism and what other symptoms might Amy be experiencing?

(6 marks)

1. Draw a diagram to explain one way Amy’s thyroid hormone feedback loop has changed since she has had hypothyroidism. Explain what treatment Amy would require to allow her to become symptom free.

(8 marks)