

**Year 11 Human Biology**

**Extended Response: Musculoskeletal System and DNA**

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| Name: |
| Teacher: |

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|  | Marks Available | Marks Achieved |
| Question 1 | 15 |  |
| Question 2 | 7 |  |
| Question 3 | 8 |  |
| Total | 30 |  |

Assessment Time: 55 minutes

Weighting: 5%

**Extended Response: Muscular Skeletal System and DNA**

**1 a)** Protein synthesis involves two stages, transcription and translation. Describe the main steps in translation. (7 marks)

**1 b)** Describe the differences between nuclear DNA and mitochondrial DNA.

(8 marks)

**2)** There are 6 different types of synovial joints within the human body. State what a synovial joint is and explain the types of movement the hinge, saddle and gliding joint provide. In your answer, give an example of where each of these types of joint could be found in a human body.

(8 marks)

**3)** Use annotated diagrams to explain the sliding filament model of muscle contraction showing a sarcomere contracted and relaxed. (7 marks)

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