11 HUMAN BIOLOGY

STEM CELLS VALIDATION

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. State which type of stem cell is more versatile; pluripotent stem cells or multipotent stem cells, and explain why. (2 marks)

2. List two currently accepted and routinely practiced stem cell therapies. (2 marks)

3. ‘Creating human embryonic stem cells destroys a life’ is a common belief in society. Describing three advantages and three disadvantages of using embryonic stem cells for research in regard to this statement. (6 marks)

5. Embryonic stem cells are capable of self-renewal and are quite prolific in the lab (many cells can be made). Explain why this is appealing to scientists. (1 mark)

6. Describe the benefits of using stem calls to study diseases and to test the effects of new drugs.

(2 marks)

7. In regards to how the stem cells are obtained, explain which stem cell type you would feel most comfortable using if you required the assistance of stem cells to cure a disease. Explain your choice.

(3 marks)