

**Advanced Higher Biology**

**Cells and Proteins: Protein control of Cell Division**

By the end of this unit you should be able to:

1. State that cell division requires the remodelling of the cell’s cytoskeleton.

2. Describe the components of the cytoskeleton.

3. Explain the link between control of the cell cycle and degenerative disease, and tumour formation.

4. Describe what happens during interphase.

5. Describe, in detail, the main stages of mitosis.

6. Recognise and sequence diagrams of the different events that take place during mitosis.

7. Carry out an experiment to demonstrate mitosis in root tips.

8. Name the 3 key checkpoints involved in the regulation of the cell cycle, and describe what happens at each.

9. Describe the role of cyclin proteins and cyclin dependant kinases at the G1 checkpoint.

10. Explain the importance of the protein p53 in the cell cycle.

11. Define the term apoptosis.

12. Describe some possible triggers in the process of apoptosis.