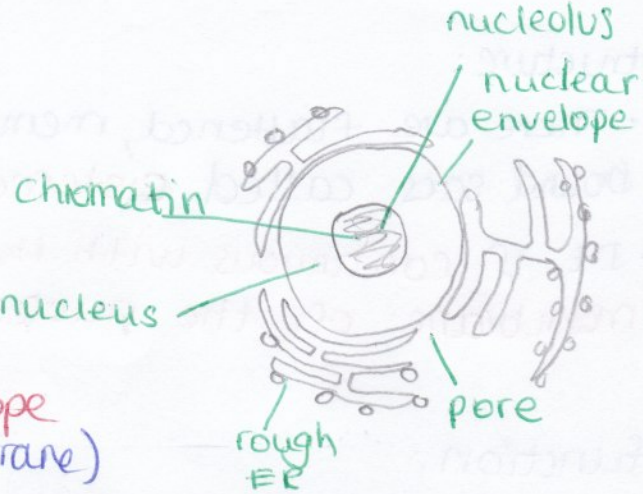
① The nucleus



Structure:

- It is the largest organelle
- Contains Chromatin
- surrounded by a nuclear envelope (formed of an outer and inner membrane)
- has nuclear pores which extend through the envelope
- The pores let mRNA out and nucleotides in
- The nucleolus is a dense spherical structure
- nuclear envelope is continuous with endoplasmic reticulum (outer membrane)

Function

- It houses nearly all the genetic material
- Chromatin consists of DNA & protein, chromosomes wound around histones.
- Chromatin has instructions for protein synthesis
- It has instructions to control activities of the cell

Roles of the cytoskeleton (6 marks)

- Movement of organelles through the cytoplasm
- support & to keep the cells shape
- keeps organelles in place
- Allow movement of chromatids
- Allows cells to change shape during cytokinesis
- Allows cilia & flagella to move, which can move the cell
- Movement of vesicles from ER → GA
- for cytokinesis
- TO transport mRNA out of the nucleus
- to transport proteins