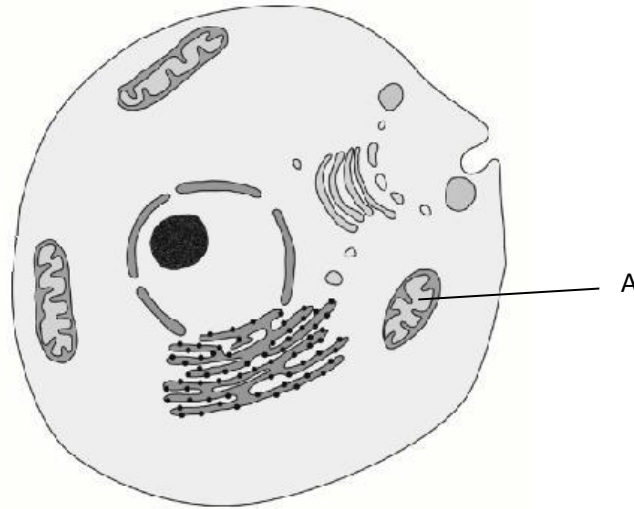
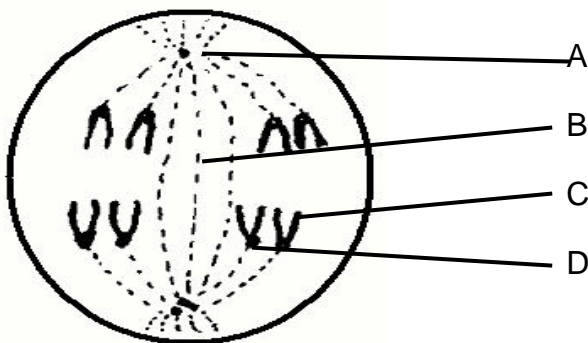


1.4. Examine the diagram below of a cell and answer the questions that follow.



- 1.4.1. Identify whether the above diagram represents a plant or an animal cell? (1)
- 1.4.2. Give TWO observable reasons for your answer. (4)
- 1.4.3. Draw and label the structure of a organelle marked A in the diagram (4)
- (9)**

1.5. The following diagram shows a plant cell at the beginning of cell division:



- 1.5.1. Provide labels for parts A,B,C and D. (4)
- 1.5.2. How many chromosomes are shown in the diagram above? (1)
- 1.5.3. How many chromosomes would be found in the daughter cells at end of cell division of the above cell? (2)
- 1.5.4 Explain TWO ways in which mitosis is biologically significant. (4)

[11]

QUESTION 2

2.1. Read the following extract and answer the questions that follow.

CANCER - MITOSIS GONE WRONG

Colorectal cancer, also called colon cancer or large bowel cancer, includes cancerous growths in the colon, rectum and appendix. With 655,000 deaths worldwide per year, it is the third most common form of cancer and the second leading cause of cancer-related deaths in the Western world. These mushroom-shaped growths are usually benign, but some may develop into cancer over time. The majority of the time, the diagnosis of localized colon cancer is through a colonoscopy. Therapy is usually through surgery, which in many cases is followed by chemotherapy.

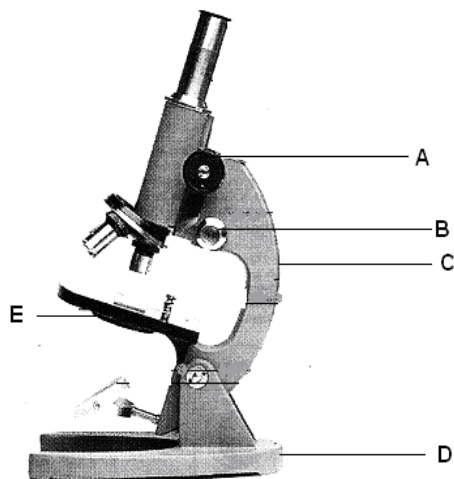
2.1.1. Explain the statement that cancer is “mitosis gone wrong”. (2)

2.1.2 What is meant by the term “benign”? (1)

2.1.3 Some cancer sufferers do not want to undergo chemotherapy. State whether you would advise a cancer sufferer to undergo chemotherapy and provide a reason for your answer. (2)

[5]

2.2. Study the diagram below and answer the questions that follow.



2.2.1. Identify the above apparatus ? (1)

2.2.2. Provide labels for parts A,C, D and E . (4)

[5]