

MEMO 13 MAY

QUESTION 2

2.1.1 It rises. ✓ (1)

2.1.2 Osmosis ✓ (1)

2.1.3 Water moves from a region of high water potential ✓ to a region of low water potential ✓ across a selectively or partially permeable membrane. ✓ (3)

[5]

2.4.1 S - protein ✓

T – phospholipids ✓ (2)

2.4.2 Information on DNA leaves the nucleus and goes into the cytoplasm with the help of RNA ✓. Proteins are made at the ribosomes in cytoplasm ✓. (2)

2.4.3 The presence of many ✓ mitochondria ✓ (2)

2.4.4 Diffusion – the movement of a substance from a high concentration ✓ to a low concentration ✓ along a concentration gradient ✓. (3)

2.4.5 Creates a larger surface area ✓ ✓. (2)

2.4.6 glycogen ✓ (1)

[12]

2.5.1 Part B ✓ ✓ (2)

2.5.2 Spindle disintegrates ✓.

Chromatids are now seen as chromosomes ✓.

Nuclear membrane forms around the chromatids at each pole ✓.

Cytokinesis starts along the equator between each set of chromatids ✓.

A cellulose cell plate is formed ✓.

Two daughter cells are formed ✓. (any 5) (5)

2.5.3 Total time for mitosis = 200

Stage 3 = 25 minutes

Percentage of total time for mitosis is $25/200 \times 100 = 12,5\%$ ✓ ✓ (2)

2.5.4 A) centromere ✓ (1)

B) During interphase ✓ the DNA are identically replicated ✓. (2)

C) The chromatids are separated into daughter chromosomes ✓. (1)

[13]