1.1 Cell Biology: 10-minute Pack

AQA 8461 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The cell membrane surrounds the cytoplasm, the part of the cell where many chemical reactions occur.

(a) State two functions of the cell membrane. **(2)**

(Total for Question 1 is 2 marks)

2 A student looks at onion cells under a light microscope and sees a clear rectangular shape with a darker small circle inside each cell.

(a) Identify the structure that appears as the clear rectangular outline of each onion cell. **(1)**

(b) Identify the darker small circle seen inside each cell. **(1)**

(Total for Question 2 is 2 marks)

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3 This question is about the structure of cells.

(a) Which structure controls what enters and leaves an animal cell? **(1)**

- ☐ A) Nucleus
- ☐ B) Cell membrane
- ☐ C) Cytoplasm
- ☐ D) Mitochondria

(b) Name the part of a plant cell in which photosynthesis takes place. **(1)**

(c) State one structure found in a plant cell but not in an animal cell, other than a chloroplast. **(1)**

(Total for Question 3 is 3 marks)

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4 This question is about units used to measure cells.

(a) Put these units of length in order of size, from smallest to largest: mm, nm, µm. **(1)**

(b) How many micrometres (µm) are there in 1 millimetre (mm)? **(1)**

(Total for Question 4 is 2 marks)

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Mark scheme · 1.1 Cell Biology: 10-minute Pack

Question 1

(a) controls movement of substances in and out of the cell, oe **B1**

(a) acts as a barrier/separates cell from its surroundings or allows recognition/communication, oe **B1**

(a) Answer: Controls movement of substances in and out of the cell; acts as a barrier between the cell and its surroundings or enables cell communication.

Question 2

(a) cell wall cao **B1**

(a) Answer: Cell wall

(b) nucleus cao **B1**

(b) Answer: Nucleus

Question 3

(a) B (cell membrane) **B1**

(b) chloroplast(s) **B1**

(b) Answer: Chloroplast

(c) cell wall / permanent vacuole (allow: made of cellulose) **B1**

(c) Answer: Cell wall (or permanent vacuole)

Question 4

(a) nm, µm, mm (in this order) **B1**

(a) Answer: nm, µm, mm

(b) 1000 **B1**

(b) Answer: 1000

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