KS3 SCIENCE · BIOLOGY

Cells: exam questions

Name _____
Total: 18 marks

1 Name the part of a cell that controls what the cell does. **[1 mark]**

2 State two parts found in plant cells but not in animal cells. **[2 marks]**

3 Describe the job of the mitochondria. **[2 marks]**

4 A microscope has a ×10 eyepiece lens and a ×40 objective lens. Calculate the total magnification. **[2 marks]**

5 Root hair cells have no chloroplasts. Explain why. **[2 marks]**

6 Explain one way a red blood cell is adapted to carry oxygen. **[2 marks]**

7 Describe how to make a slide of onion cells. **[4 marks]**

8 Oxygen moves from the lungs into the blood by diffusion. Explain what diffusion means. **[2 marks]**

9 Put these in order, smallest first: organ, cell, organ system, tissue. **[1 mark]**

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Cells: mark scheme

Total: 18 marks

1 [1 mark]

- Nucleus **(1)**

2 [2 marks]

- Cell wall **(1)**
- Chloroplasts **(1)**
- Vacuole **(1)**

Any two. The most you can score is 2.

3 [2 marks]

- Respiration happens there **(1)**
- Energy is released **(1)**

No mark for “makes energy”.

4 [2 marks]

- 10 × 40 **(1)**
- ×400 **(1)**

5 [2 marks]

- They are underground, so they get no light **(1)**
- They cannot photosynthesise, so they do not need chloroplasts **(1)**

6 [2 marks]

- Names a feature: no nucleus, or a disc shape with a dip **(1)**
- Says how it helps: more room to carry oxygen (accept: more room for haemoglobin), or a large surface area **(1)**

7 [4 marks]

- Peel a thin layer of onion skin **(1)**
- Lay it flat in a drop of water on a slide **(1)**
- Add a stain such as iodine **(1)**
- Lower a coverslip slowly, at an angle, to avoid air bubbles **(1)**

8 [2 marks]

- Particles spread out or move **(1)**
- From high concentration to low concentration **(1)**

9 [1 mark]

- Cell, tissue, organ, organ system **(1)**