Cell biology

Biology Paper 1 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 Which part of a cell holds the genetic material and controls what the cell does?

2 Name the cell part that controls which substances move into and out of the cell.

3 In which structures does most aerobic respiration take place?

4 Name the tiny structures where proteins are made.

5 What substance is a plant cell wall made of?

6 Which green structures in a leaf cell absorb light for photosynthesis?

7 What liquid fills the permanent vacuole of a plant cell?

8 Bacteria have no nucleus. What is the name for this type of cell?

9 What name is given to the small rings of DNA found in many bacteria?

10 A drawing of a cell is 6 mm wide. The real cell is 0.02 mm wide. What is the magnification?

11 An electron microscope can show two points close together as separate. What is this ability called?

12 What is the name of the process by which a cell becomes specialised for a job?

13 Which specialised plant cell has a long projection that gives a large surface area for taking in water?

14 Name the substance that strengthens the walls of xylem vessels.

15 How many chromosomes are in the nucleus of a normal human body cell?

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16 Name the type of cell division that makes two genetically identical cells for growth and repair.

17 Where in an adult human are stem cells found that can form different types of blood cell?

18 What is the name of the tissue at the tips of plant shoots and roots that contains stem cells?

19 Explain why stem cells made by therapeutic cloning are not rejected by the patient's body.

20 What is the name for the net spreading out of particles from an area of higher concentration to an area of lower concentration?

21 The concentration gradient across a membrane gets steeper. What happens to the rate of diffusion? Answer in one word.

22 A cube has sides of 2 cm. What is its surface area to volume ratio? Give it in the form n : 1.

23 Osmosis is the diffusion of which substance through a partially permeable membrane?

24 Name the process that moves substances against a concentration gradient using energy from respiration.

25 Explain why root hair cells cannot take in mineral ions from the soil by diffusion alone.

26 What name is given to the way bacteria multiply by splitting into two?

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27 A bacterium divides every 30 minutes. Starting with one cell, how many bacteria will there be after 3 hours?

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28 In a school lab, what is the highest temperature (in °C) at which bacterial cultures should be incubated?

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29 Explain why an inoculating loop is passed through a hot flame before it is used to spread bacteria.

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30 A clear zone around an antibiotic disc has a radius of 4 mm. What is its area in mm^2? Give your answer to the nearest whole number.

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