

OBHS Core Questions:

Subject: Science

Year and Term: Year 9 Autumn Term

Topic: B1 Cell Biology



Learn these questions to build a strong foundation of knowledge for this half-term. Ask family or friends to test you regularly, or practise on your own using the 'Look, Say, Cover, Write' method.

Question	Answer
1. Which part of the cell contains the genetic information?	Nucleus
2. State one part of a plant cell that is not found in an animal cell.	Cell wall, chloroplasts, vacuole
3. What is the job of a nerve cell?	Carry electrical signals around the body
4. What is the function of the mitochondria?	Release energy by the process of aerobic respiration
5. What is the function of the cell wall?	Supports the cell
6. What is the function of the chloroplast?	Absorbs light for photosynthesis
7. What is the function of the cell membrane?	Allows substances in and out of the cell.
8. State which specialised cell carries oxygen round the body.	Red blood cell
9. State what the term eukaryotic means.	DNA is stored in a nucleus
10. Diffusion is the movement of substances from a _____ concentration to a low concentration.	High
11. What does the term "passive" mean?	Does not require any extra energy
12. Which substance moves by osmosis?	Water
13. State one part of a bacteria cell that is not found in an animal cell.	Cell wall, flagellum, plasmids, single loop of DNA, slime capsule
14. How many micrometres (μm) are in 2 millimetres (mm)?	2000
15. Which type of microscope can view cells at the greatest magnification- light microscopes or electron microscopes?	Electron
16. Use the equation to work out magnification when the size of the image is 60mm and the size of the real object is 0.2mm. magnification = $\frac{\text{size of image}}{\text{size of real object}}$	$60/0.2 = 300$

17. Which solution is used to stain cells so that they can be seen under a microscope?	Iodine
18. How is active transport different to osmosis and diffusion?	Requires energy, movement of substances from a low to a high concentration
19. State one substance which can move by diffusion.	Oxygen, carbon dioxide, glucose, urea, amino acids
20. Which part of a bacteria cell helps it to move (for locomotion).	Flagellum (tail)
21. Which parts of a bacteria cell are not found in an animal cell?	Flagellum, cell wall, plasmids, single loop of DNA
22. Is bacteria a eukaryotic or prokaryotic cell? Explain your answer	Prokaryotic, because its DNA is not found in a nucleus, it has a single loop of DNA.
23. How is the small intestine adapted to carry out lots of glucose absorption?	Has villi and microvilli to increase the surface area of the small intestine. Also has lots of mitochondria to release energy needed for active transport.
24. Which kinds of substances will be moved by active transport?	Glucose Mineral ions
25. Why are thin layers of cells used when looking at them through a light microscope?	So that light can pass through the cells, making them visible, if there are too many layers of cell you will not be able to view them.