ENGLAND GCSE COMBINED SCIENCE AQA SYNERGY FOUNDATION · UNIT 1 · 25 QUESTIONS

Building Blocks — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

A particles move freely

B particles flow past each other easily

C particles vibrate in fixed positions

D particles are far apart

Understand It with Pulse | Flag a mistake

2 **A guitar string vibrates to make a sound. What type of wave is the sound wave?**

- A standing
- B longitudinal
- C transverse
- D electromagnetic

Understand It with Pulse | Flag a mistake

3 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

- A they lose energy and slow down a lot
- B they stop moving
- C they get smaller
- D they gain energy and move more

Understand It with Pulse | Flag a mistake

4 **A sunflower makes glucose in its leaves. Which gas does it take in for photosynthesis?**

- A nitrogen gas from the air
- B carbon dioxide
- C hydrogen gas from the air
- D oxygen gas from the air

Understand It with Pulse | Flag a mistake

5 **A swimming pool is filled with water. What is the density of water?**

- A about 1 kilogram per cubic metre
- B about 10 kilograms per cubic metre
- C about 1000 kilograms per cubic metre
- D about 100 kilograms per cubic metre, roughly

Understand It with Pulse | Flag a mistake

6 **Potatoes are placed in pure water. What happens to the potato cells?**

A they gain water

B they stay the same

C they lose water

D they burst

Understand It with Pulse | Flag a mistake

7 **In which state do particles vibrate in fixed positions?**

A liquid

B solid

C plasma

D gas

Understand It with Pulse | Flag a mistake

8 **Which of these is found in both animal cells and plant cells?**

A a chloroplast

B a large vacuole

C a cell wall

D a mitochondrion

Understand It with Pulse | Flag a mistake

9 **An atom has 19 protons and 20 neutrons. What is its mass number?**

A 41

B 39

C 20

D 19

Understand It with Pulse | Flag a mistake

10 **Which part of a plant cell gives the cell strength and support?**

A the vacuole

B the chloroplast

C the cell wall

D the cell membrane

Understand It with Pulse | Flag a mistake

11 **A hot air balloon rises because the air inside it is less dense than the air outside. What happens to the density of air when it is heated?**

A it becomes zero

B it increases

C it decreases

D it stays the same

Understand It with Pulse | Flag a mistake

12 **In which direction do particles move by diffusion?**

- **A** from high to low concentration
- **B** from cold to hot
- **C** from low to high concentration
- **D** from large to small

Understand It with Pulse | Flag a mistake

13 **An atom has atomic number 11 and mass number 23. How many neutrons does it have?**

- **A** 11
- **B** 34
- **C** 12
- **D** 23

Understand It with Pulse | Flag a mistake

14 **Which change of state happens when a liquid is heated?**

A melting

B condensing

C boiling

D freezing

Understand It with Pulse | Flag a mistake

15 **An object has a mass of 20 g and a volume of 20 cubic centimetres. What is its density?**

A 0.5 g/cm³

B 1 g/cm³

C 40 g/cm³

D 2 g/cm³

Understand It with Pulse | Flag a mistake

16 **Eggs are produced by hens. What is the female reproductive cell called?**

A a zygote

B an embryo

C a sperm cell

D an egg cell

Understand It with Pulse | Flag a mistake

17 **A plant cell in pure water becomes turgid. What does turgid mean?**

A shrunken and soft

B empty and flat

C swollen and firm

D dead and dry

Understand It with Pulse | Flag a mistake

18 **In which part of the cell cycle does the DNA copy itself?**

A before mitosis starts

B when the cell dies

C during cell division only

D after the cell splits

Understand It with Pulse | Flag a mistake

19 **What type of wave is light?**

A sound

B transverse

C seismic

D longitudinal

Understand It with Pulse | Flag a mistake

20 **In which state can particles flow but stay close together?**

- A plasma
- B gas
- C solid
- D liquid

Understand It with Pulse | Flag a mistake

21 **Which of these is found in a plant cell but not in an animal cell?**

- A a nucleus
- B a mitochondrion
- C a chloroplast
- D a ribosome

Understand It with Pulse | Flag a mistake

22 **An atom has 12 protons and 8 neutrons. What is its mass number?**

- A 20
- B 8
- C 22
- D 12

Understand It with Pulse | Flag a mistake

23 **Which part of a cell makes proteins?**

- A the nucleus
- B the mitochondria
- C the vacuole
- D the ribosome

Understand It with Pulse | Flag a mistake

24 **What is density?**

A mass divided by volume

B volume divided by mass

C weight divided by volume

D mass times volume

Understand It with Pulse | Flag a mistake

25 **An object has a mass of 40 g and a volume of 25 cubic centimetres. What is its density?**

A 1.6 g/cm³

B 65 g/cm³

C 0.8 g/cm³

D 3.2 g/cm³

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. B
3. D
4. B
5. C
6. A
7. B
8. D
9. B
10. C
11. C
12. A
13. C
14. C
15. B
16. D
17. C
18. A
19. B
20. D
21. C
22. A
23. D
24. A
25. A

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