ENGLAND GCSE COMBINED SCIENCE AQA SYNERGY HIGHER · UNIT 7 · 25 QUESTIONS

Movement and Interactions — 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 **A tennis ball bounces. What happens to its kinetic energy?**

- A some becomes heat
- B it all stays kinetic energy
- C it disappears completely
- D it becomes light energy

Understand It with Pulse | Flag a mistake

2 **A red race car travels at a steady speed. What is the resultant force on the car?**

- A 500 N
- B 0 N
- C 1000 N
- D 100 N

Understand It with Pulse | Flag a mistake

3 **A bicycle rolls down a hill. What happens to its gravitational potential energy?**

A it increases

B it becomes chemical energy stored in the bike

C it decreases as kinetic energy increases

D it stays the same

Understand It with Pulse | Flag a mistake

4 **A rocket launches straight up. Which force acts downwards on the rocket?**

A air resistance

B gravity

C thrust

D lift

Understand It with Pulse | Flag a mistake

5 **A basketball is thrown up. What happens to its speed as it rises?**

- A it becomes zero
- B it stays the same
- C it increases
- D it decreases

Understand It with Pulse | Flag a mistake

6 **A car goes around a roundabout at a steady speed. Is the car accelerating?**

- A no, it is not moving
- B yes, its speed is increasing all the time
- C yes, its direction is changing
- D no, its speed is steady

Understand It with Pulse | Flag a mistake

7 **A 4 kg object moves at 2 m/s. What is its kinetic energy?**

- A 18 J
- B 8 J
- C 16 J
- D 4 J

Understand It with Pulse | Flag a mistake

8 **What is stopping distance?**

- A thinking distance plus braking distance
- B braking distance only
- C thinking distance only
- D thinking distance minus braking distance

Understand It with Pulse | Flag a mistake

9 **A device transfers 1000 J of energy in 25 seconds. What is its power?**

- A 25000 W
- B 80 W
- C 20 W
- D 40 W

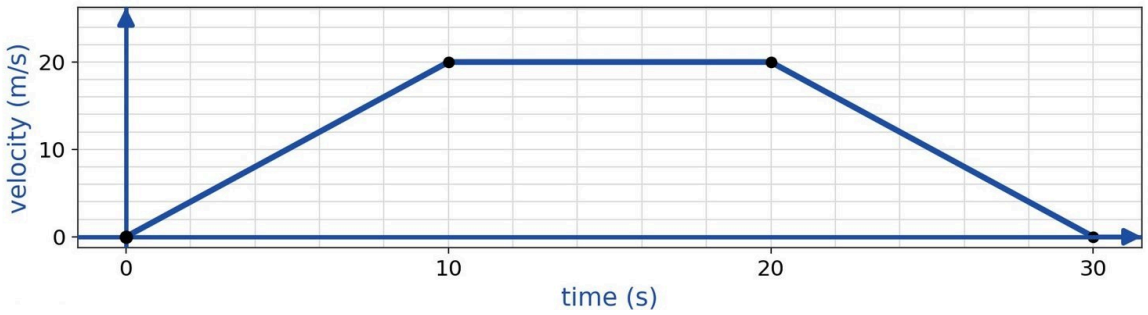
Understand It with Pulse | Flag a mistake

10 **A passenger aeroplane flies at a steady speed and height. What is the resultant force on the aeroplane?**

- A 5000 N
- B 10000 N
- C 1000 N
- D 0 N

Understand It with Pulse | Flag a mistake

11 **The graph shows a velocity-time graph. What is the acceleration in the first 10 seconds?**



A 20 m/s²

B 2 m/s²

C 10 m/s²

D 0 m/s²

Understand It with Pulse | Flag a mistake

12 **A Ferris wheel turns slowly. A person on the wheel moves in a circle. What is the person's speed like?**

A zero speed

B decreasing speed

C steady speed, changing direction

D increasing speed all the time, getting faster

Understand It with Pulse | Flag a mistake

13 **A 2 kg object is lifted 2 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

A 4 J

B 20 J

C 80 J

D 40 J

Understand It with Pulse | Flag a mistake

14 **An object speeds up from 5 m/s to 35 m/s in 10 seconds. What is its acceleration?**

A 3 m/s²

B 30 m/s²

C 6 m/s²

D 1.5 m/s²

Understand It with Pulse | Flag a mistake

15 **What does Fleming's left-hand rule give?**

A the direction of the force

B the size of the force

C the direction of the current

D the direction of the field

Understand It with Pulse | Flag a mistake

16 **A device works at 230 V with a current of 3 A. What is its power?**

- A 690 W
- B 345 W
- C 700 W
- D 1380 W

Understand It with Pulse | Flag a mistake

17 **A 2 kg object moves at 3 m/s. What is its kinetic energy?**

- A 4.5 J
- B 9 J
- C 18 J
- D 19 J

Understand It with Pulse | Flag a mistake

18 **What is the momentum of a 2 kg object moving at 4 m/s?**

A 6 kg m/s

B 4 kg m/s

C 8 kg m/s

D 16 kg m/s

Understand It with Pulse | Flag a mistake

19 **A device transfers 100 J of energy in 10 seconds. What is its power?**

A 10 W

B 1000 W

C 5 W

D 20 W

Understand It with Pulse | Flag a mistake

20 **A 10 kg object is lifted 5 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- **A** 500 J
- **B** 250 J
- **C** 50 J
- **D** 1000 J

Understand It with Pulse | Flag a mistake

21 **An object speeds up from 5 m/s to 15 m/s in 10 seconds. What is its acceleration?**

- **A** 10 m/s²
- **B** 0.5 m/s²
- **C** 2 m/s²
- **D** 1 m/s²

Understand It with Pulse | Flag a mistake

22 **What does a concave lens do to light?**

A it brings light to a focus

B it spreads light out

C it reflects light

D it absorbs light

Understand It with Pulse | Flag a mistake

23 **What does sound need to travel through?**

A a medium

B water only

C a vacuum

D air only

Understand It with Pulse | Flag a mistake

24 **A 4 kg object moves at 3 m/s. What is its kinetic energy?**

- **A** 36 J
- **B** 28 J
- **C** 9 J
- **D** 18 J

Understand It with Pulse | Flag a mistake

25 **What is braking distance?**

- **A** the distance to the car ahead
- **B** the total stopping distance
- **C** the distance travelled while braking
- **D** the distance travelled while the driver reacts

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.