ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · UNIT 18 · 25 QUESTIONS

Motion and Forces — 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 passenger aeroplane takes off. Which force lifts it up?**

- A drag
- B thrust
- C weight
- D lift

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2 **A rocket in space has no air around it. What happens to air resistance?**

- A it stays the same
- B it increases
- C it becomes gravity
- D there is none

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

A decreasing speed

B steady speed

C zero speed

D increasing speed

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4 **A bicycle has brakes. What do the brakes do to kinetic energy?**

A destroy it

B store it

C turn it into light and sound

D transfer it to heat

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5 **A red race car has a large rear wing. What does the wing do?**

- A increases grip
- B reduces grip
- C increases speed
- D reduces drag to zero

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6 **A kite rises higher. What happens to the wind speed usually?**

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

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7 **What force is needed to accelerate a 2 kg object at 3 m/s squared?**

- A 6 N
- B 12 N
- C 3 N
- D 11 N

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8 **A basketball bounces. What type of energy is stored when the ball squashes?**

- A kinetic
- B elastic potential
- C thermal
- D gravitational potential

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9 **What is the weight of a 50 kg object on Earth? Use g = 10 N/kg.**

- A 250 N
- B 500 N
- C 50 N
- D 1000 N

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10 **Hardcover books are dropped. What happens to their speed as they fall?**

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

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11 **An object speeds up from 10 m/s to 20 m/s in 10 seconds. What is its acceleration?**

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

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12 **An object travels 200 m in 25 seconds. What is its speed?**

- **A** 16 m/s
- **B** 8 m/s
- **C** 4 m/s
- **D** 5000 m/s

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13 **A passenger train carries people around the country. Which part of the blood is like the train, carrying oxygen around the body?**

- A red blood cells
- B platelets
- C plasma
- D white blood cells

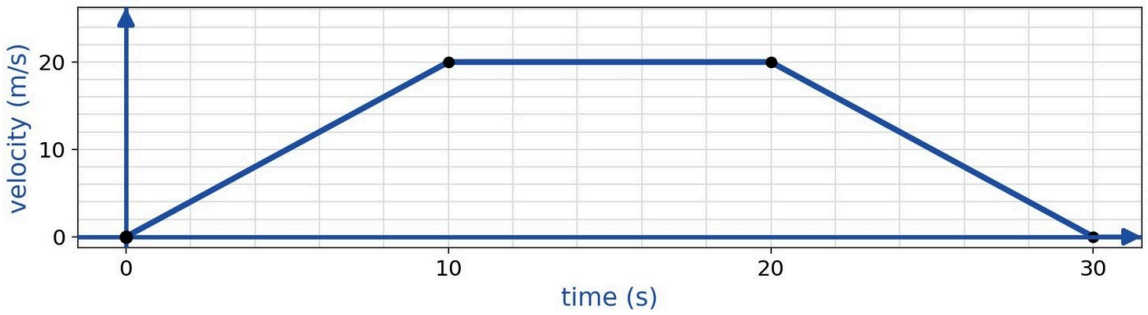
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14 **What is stopping distance?**

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

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



A 20 m/s²

B 0 m/s²

C 10 m/s²

D 2 m/s²

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16 **A wristwatch ticks every second. How many ticks in a minute?**

- A 30
- B 100
- C 60
- D 12

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17 **A tennis ball is hit across a court. Which force slows the ball down in the air?**

- A air resistance
- B the hit
- C gravity
- D friction with the ground

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18 **What is terminal velocity?**

A the speed of sound in air

B top steady falling speed

C the speed when an object starts to fall

D the speed when drag is zero

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19 **What force is needed to accelerate a 10 kg object at 2 m/s squared?**

A 40 N

B 10 N

C 25 N

D 20 N

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20 **What is Newton's Second Law?**

- A an object stays still unless a force acts
- B every action has an equal reaction
- C force equals mass times acceleration
- D energy is conserved

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21 **What is the weight of a 5 kg object on Earth? Use g = 10 N/kg.**

- A 100 N
- B 5 N
- C 50 N
- D 25 N

Understand It with Pulse | Flag a mistake

22 **An object travels 100 m in 20 seconds. What is its speed?**

- A 10 m/s
- B 2.5 m/s
- C 2000 m/s
- D 5 m/s

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23 **Which factor increases braking distance?**

- A drinking alcohol
- B being distracted
- C a wet road
- D being tired

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24 **A heavier skydiver and a lighter skydiver fall with the same parachute. Who falls faster at terminal velocity?**

- A the lighter skydiver
- B neither falls at all
- C they fall at the same speed
- D the heavier skydiver

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25 **What force is needed to accelerate a 2 kg object at 5 m/s squared?**

- A 15 N
- B 20 N
- C 10 N
- D 5 N

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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