ENGLAND GCSE PHYSICS AQA FOUNDATION · UNIT 5 · 25 QUESTIONS

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 to let Brett know so he can fix it.

1 **A car goes around a roundabout. Which force keeps it turning?**

- A gravity
- B air resistance
- C thrust
- D friction

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

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

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3 **A cardboard box is full of books. What is its mass like?**

- A smaller than when empty
- B zero
- C the same as when empty
- D larger than when empty

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

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

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5 **A kite flies in the wind. Which force holds the kite up?**

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

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6 **A passenger train brakes. What force slows it down?**

- A thrust
- B gravity, pulling it down
- C friction
- D lift

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7 **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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8 **A Ferris wheel is at the top. What is the person's height like?**

A at its greatest

B unchanged

C at its smallest

D at zero

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9

What is a scalar quantity?

A a quantity with no size

B a quantity with size and direction

C a quantity with size only

D a quantity with direction only

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10

Which factor increases braking distance?

A drinking alcohol

B being tired

C a wet road

D being distracted

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11 **A force of 200 N acts on an area of 2 square metres. What is the pressure?**

- A 105 Pa
- B 100 Pa
- C 50 Pa
- D 200 Pa

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

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

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13 **What force is needed to accelerate a 10 kg object at 4 m/s squared?**

- A 45 N
- B 20 N
- C 80 N
- D 40 N

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14 **What is the limit of proportionality for a spring?**

- A the point where the spring is longest
- B the point where the spring breaks
- C the point where no force is needed
- D force stops matching extension

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15 **What does a gear do in a bicycle?**

- A it stores energy
- B it stops the bike
- C it makes the wheels bigger and heavier
- D it changes force and speed

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

- A 10 m/s^2
- B 1 m/s^2
- C 2 m/s^2
- D 0.5 m/s^2

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17 **A yellow school bus stops at a station. What happens to its speed?**

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

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18 **A force of 50 N acts 4 m from a pivot. What is the moment of the force?**

- A 400 Nm
- B 100 Nm
- C 210 Nm
- D 200 Nm

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

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

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20 **A bicycle is ridden uphill. Which energy store increases?**

- A gravitational potential
- B elastic potential energy
- C thermal energy from friction
- D kinetic energy of motion

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

A 1000 N

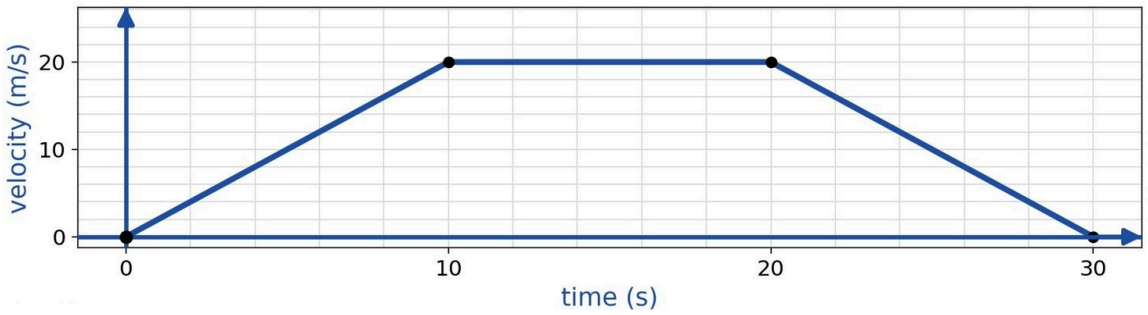
B 10000 N

C 5000 N

D 0 N

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



A 10 m/s²

B 20 m/s²

C 0 m/s²

D 2 m/s²

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23 **An object travels 300 m in 20 seconds. What is its speed?**

- A 30 m/s
- B 15 m/s
- C 6000 m/s
- D 7.5 m/s

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24 **A ladder is used to reach a roof. What is the ladder an example of?**

- A a simple machine
- B a lever only
- C a complex machine
- D a power source

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25

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

A friction with the ground

B gravity

C air resistance

D the hit

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Flag a mistake

ANSWER KEY

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

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