ENGLAND GCSE PHYSICS OCR GATEWAY HIGHER · UNIT 2 · 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 wristwatch is used to time a race. What is speed calculated from?**

- A distance only, not time
- B mass and time together
- C time only, not distance
- D distance and time

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

3 **A wooden footbridge carries people. What is the load on the bridge?**

- A the weight of the people
- B the water flowing under it
- C the wind blowing across it
- D the wood of the bridge itself

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A a simple machine

B a complex machine

C a lever only

D a power source

Understand It with Pulse | Flag a mistake

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

A gravity

B lift

C thrust

D air resistance

Understand It with Pulse | Flag a mistake

7 **Hardcover books are stacked on a table. What force pulls them down?**

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

Understand It with Pulse | Flag a mistake

8 **An object travels 300 m in 25 seconds. What is its speed?**

- A 7500 m/s
- B 6 m/s
- C 24 m/s
- D 12 m/s

Understand It with Pulse | Flag a mistake

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

A 12 m/s²

B 3 m/s²

C 30 m/s²

D 6 m/s²

Understand It with Pulse | Flag a mistake

10 **A kite is held by a string. What force does the string exert?**

A gravity

B friction

C air resistance

D tension

Understand It with Pulse | Flag a mistake

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

A gravitational potential

B kinetic

C thermal

D elastic potential

Understand It with Pulse | Flag a mistake

12 **A 10 kg trolley moves at 4 m/s. What is its momentum?**

A 20 kg m/s

B 40 kg m/s

C 80 kg m/s

D 45 kg m/s

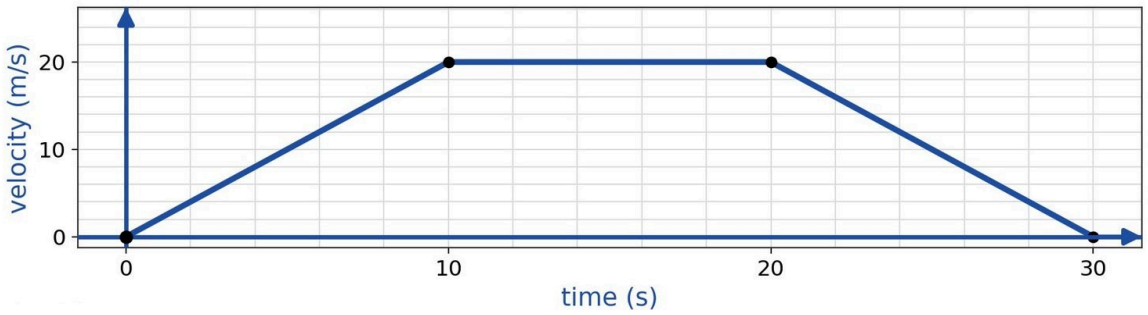
Understand It with Pulse | Flag a mistake

13 **A small gear drives a large gear. What happens to the turning force?**

- A it disappears
- B it stays the same
- C it falls and the speed rises
- D force up, speed down

Understand It with Pulse | Flag a mistake

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



- **A** 2 m/s²
- **B** 20 m/s²
- **C** 0 m/s²
- **D** 10 m/s²

Understand It with Pulse | Flag a mistake

15 **A force of 400 N acts on an area of 10 square metres. What is the pressure?**

- A 40 Pa
- B 80 Pa
- C 4000 Pa
- D 20 Pa

Understand It with Pulse | Flag a mistake

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

- A steady speed
- B decreasing speed
- C increasing speed
- D zero speed

Understand It with Pulse | Flag a mistake

17 **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

18 **What force is needed to accelerate a 4 kg object at 5 m/s squared?**

- A 40 N
- B 20 N
- C 10 N
- D 25 N

Understand It with Pulse | Flag a mistake

19 **Two identical springs are stretched by the same force. How do their extensions compare?**

A they are the same

B one does not stretch at all

C one stretches twice as far

D both stretch to zero

Understand It with Pulse | Flag a mistake

20 **A force of 400 N acts on an area of 2 square metres. What is the pressure?**

A 205 Pa

B 400 Pa

C 200 Pa

D 100 Pa

Understand It with Pulse | Flag a mistake

21 **What is braking distance?**

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

Understand It with Pulse | Flag a mistake

22 **A tennis ball bounces. What happens to its kinetic energy?**

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

Understand It with Pulse | Flag a mistake

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

- **A** yes, its speed is increasing quickly
- **B** no, its speed is steady and unchanging
- **C** yes, its direction is changing
- **D** no, it is not moving at all

Understand It with Pulse | Flag a mistake

24 **What is the weight of a 2 kg object on Earth? Use g = 10 N/kg.**

- **A** 2 N
- **B** 10 N
- **C** 20 N
- **D** 40 N

Understand It with Pulse | Flag a mistake

25

Two containers hold water to the same depth. One is wide and one is narrow. How do the pressures at the bottom compare?

A the narrow one has more pressure

B neither has any pressure

C they are the same

D the wide one has more pressure

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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