ENGLAND GCSE PHYSICS AQA HIGHER · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 bicycle rolls down a hill. What happens to its gravitational potential energy?**

- A it stays the same
- B it becomes chemical energy stored in the bike
- C it decreases as kinetic energy increases
- D it increases

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A particles vibrate in fixed positions

B particles flow past each other easily

C particles move freely through space

D particles are far apart from each other

Understand It with Pulse | Flag a mistake

4 **A calculator is switched on. What does the battery transfer energy to?**

A the buttons only

B the case

C the screen only

D the circuits

Understand It with Pulse | Flag a mistake

5 **A tennis ball is served fast. What is its speed like?**

A low

B high

C negative

D zero

Understand It with Pulse | Flag a mistake

6 **A Ferris wheel turns. What force keeps a person moving in a circle?**

A friction only, gripping the seat

B centripetal force

C gravity only, pulling them down

D air resistance pushing them back

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

9 **A force of 25 N pushes a box 10 m along the ground. How much work is done?**

- **A** 500 J
- **B** 280 J
- **C** 250 J
- **D** 125 J

Understand It with Pulse | Flag a mistake

10 **A resistor has a potential difference of 6 V across it and a resistance of 6 ohms. What is the current?**

- **A** 0.5 A
- **B** 2 A
- **C** 36 A
- **D** 1 A

Understand It with Pulse | Flag a mistake

11 **How much energy is needed to change 1 kg of a substance from liquid to gas, if the specific latent heat is 2260000 J per kg?**

- A 2260001 J
- B 4520000 J
- C 1130000 J
- D 2260000 J

Understand It with Pulse | Flag a mistake

12 **What happens to the activity of a sample over time?**

- A it falls then rises
- B it stays the same
- C it falls
- D it rises

Understand It with Pulse | Flag a mistake

13 **An object travels 100 m in 10 seconds. What is its speed?**

- A 5 m/s
- B 1000 m/s
- C 20 m/s
- D 10 m/s

Understand It with Pulse | Flag a mistake

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

- A it reflects light
- B it spreads light out
- C it brings light to a focus
- D it absorbs light

Understand It with Pulse | Flag a mistake

15 **The force on a wire in a magnetic field is 4 N. If the current doubles, what is the new force?**

- **A** 4 N
- **B** 8 N
- **C** 2 N
- **D** 12 N

Understand It with Pulse | Flag a mistake

16 **A passenger train travels at a steady speed. What is its acceleration?**

- **A** 0 m/s^2
- **B** 10 m/s^2
- **C** 1 m/s^2
- **D** 9.8 m/s^2

Understand It with Pulse | Flag a mistake

17 **A device has a power of 200 W. How much energy does it transfer in 10 seconds?**

- A 2000 J
- B 20000 J
- C 20 J
- D 200 J

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

19 **How much energy is needed to heat 4 kg of a substance with a specific heat capacity of 2100 J per kg per degree Celsius by 20 degrees Celsius?**

- A 168000 J
- B 336000 J
- C 8400 J
- D 84000 J

Understand It with Pulse | Flag a mistake

20 **In beta decay, what happens to the mass number of the nucleus?**

- A it falls by 1, like a proton
- B it falls by 4, like in alpha decay
- C it rises by 1, like the atomic number
- D it stays the same

Understand It with Pulse | Flag a mistake

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

A a complex machine

B a lever only

C a simple machine

D a power source

Understand It with Pulse | Flag a mistake

22 **A wave travels at 40 m/s with a wavelength of 5 m. What is its frequency?**

A 4 Hz

B 200 Hz

C 8 Hz

D 16 Hz

Understand It with Pulse | Flag a mistake

23 **What does a loudspeaker turn electrical signals into?**

- A radio waves
- B light
- C sound
- D heat

Understand It with Pulse | Flag a mistake

24 **A passenger aeroplane takes off. Which force lifts it up?**

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

Understand It with Pulse | Flag a mistake

25 **A cup of coffee is hot. How is energy transferred to the air?**

A by conduction and convection

B by evaporation only, from the top

C by condensation on the cold cup

D by radiation only, from the surface

Understand It with Pulse | Flag a mistake

26 **A small positive charge is placed in an electric field. Which way does the force on it point?**

A at right angles to the field

B along the field lines

C there is no force on it

D against the field lines

Understand It with Pulse | Flag a mistake

27 **A block has a mass of 500 g and a volume of 500 cubic centimetres. What is its density?**

- A 0.5 g/cm³
- B 2 g/cm³
- C 1 g/cm³
- D 4 g/cm³

Understand It with Pulse | Flag a mistake

28 **What conditions are needed for nuclear fusion?**

- A high temperature and pressure
- B no pressure at all
- C very low temperature, near freezing
- D darkness and cold

Understand It with Pulse | Flag a mistake

29 **Which factor increases braking distance?**

A drinking alcohol

B being distracted

C being tired

D a wet road

Understand It with Pulse | Flag a mistake

30 **What happens when light passes from air into glass?**

A it reflects back only

B it slows and bends

C it speeds up and bends

D it stops

Understand It with Pulse | Flag a mistake

31 **How can an electromagnet be made stronger?**

A a smaller current

B more turns on the coil

C a wooden core

D fewer turns on the coil

Understand It with Pulse | Flag a mistake

32 **A red race car speeds up on a straight track. What is the resultant force doing?**

A causing deceleration

B causing a turn

C doing nothing

D causing acceleration

Understand It with Pulse | Flag a mistake

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

A there is none

B it increases

C it becomes gravity

D it stays the same

Understand It with Pulse | Flag a mistake

34 **Hardcover books have mass. What is mass measured in?**

A newtons, the unit of force

B kilograms

C watts

D joules

Understand It with Pulse | Flag a mistake

35 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

A a chemical change

B a neutralisation

C an energy transfer

D a reversible reaction

Understand It with Pulse | Flag a mistake

36 **A calculator uses a battery. What energy is stored in the battery?**

A light energy from the Sun

B chemical energy

C thermal energy from heat

D kinetic energy of motion

Understand It with Pulse | Flag a mistake

37 **A yellow school bus carries children to school. Which blood vessel carries blood away from the heart, like a bus leaving the station?**

- A a ventricle
- B a capillary
- C an artery
- D a vein

Understand It with Pulse | Flag a mistake

38 **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 increasing speed
- C steady speed
- D decreasing speed

Understand It with Pulse | Flag a mistake

39 **A passenger aeroplane cruises. Which force opposes its motion?**

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

Understand It with Pulse | Flag a mistake

40 **A basketball is dropped. What energy store increases as it falls?**

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

Understand It with Pulse | Flag a mistake

41 **A cheese pizza provides energy. Which nutrient provides most energy?**

A vitamins

B protein

C fibre

D fat

Understand It with Pulse | Flag a mistake

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

A gravity

B friction with the ground

C air resistance

D the hit

Understand It with Pulse | Flag a mistake

43 **A block has a mass of 400 g and a volume of 500 cubic centimetres. What is its density?**

- A 1.6 g/cm³
- B 0.4 g/cm³
- C 0.8 g/cm³
- D 3.8 g/cm³

Understand It with Pulse | Flag a mistake

44 **A sample has an activity of 3200 counts per minute. After 2 half-lives, what is its activity?**

- A 400
- B 800
- C 1600
- D 3200

Understand It with Pulse | Flag a mistake

45 **Which of these is a vector?**

A force

B distance

C time

D speed

Understand It with Pulse | Flag a mistake

46 **A wave has a frequency of 5 Hz and a wavelength of 3 m. What is the wave speed?**

A 15 m/s

B 30 m/s

C 20 m/s

D 7 m/s

Understand It with Pulse | Flag a mistake

47 **Why is electricity transmitted at high voltage?**

A to increase the current

B to reduce energy loss

C to make it safer

D to make it cheaper to make

Understand It with Pulse | Flag a mistake

48 **What holds the planets in orbit around the Sun?**

A magnetism

B air pressure

C friction

D gravity

Understand It with Pulse | Flag a mistake

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

A it increases

B it decreases

C it stays the same

D it becomes zero

Understand It with Pulse | Flag a mistake

50 **A guitar string is tightened. What happens to the pitch?**

A it disappears

B it stays the same

C it falls

D it rises

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**18.**	B	**35.**	C
2.	A	**19.**	A	**36.**	B
3.	A	**20.**	D	**37.**	C
4.	D	**21.**	C	**38.**	C
5.	B	**22.**	C	**39.**	B
6.	B	**23.**	C	**40.**	D
7.	A	**24.**	A	**41.**	D
8.	D	**25.**	A	**42.**	C
9.	C	**26.**	B	**43.**	C
10.	D	**27.**	C	**44.**	B
11.	D	**28.**	A	**45.**	A
12.	C	**29.**	D	**46.**	A
13.	D	**30.**	B	**47.**	B
14.	B	**31.**	B	**48.**	D
15.	B	**32.**	D	**49.**	B
16.	A	**33.**	A	**50.**	D
17.	A	**34.**	B		

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