ENGLAND GCSE PHYSICS AQA FOUNDATION · 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 cup of coffee is left for an hour. What happens to its temperature?**

- A it stays the same all day
- B it falls to zero degrees
- C it falls to room temperature
- D it rises above room temperature

Understand It with Pulse | Flag a mistake

2 **A calculator runs on a small current. What is current measured in?**

- A amperes
- B volts, the unit of voltage
- C watts, the unit of power
- D ohms, the unit of resistance

Understand It with Pulse | Flag a mistake

3 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 4200 J per kg per degree Celsius by 10 degrees Celsius?**

- A 4200 J
- B 84000 J
- C 42000 J
- D 21000 J

Understand It with Pulse | Flag a mistake

4 **Silver coins conduct electricity well. Why?**

- A they are shiny and reflective
- B they are cold
- C they are heavy
- D they have free electrons

Understand It with Pulse | Flag a mistake

5 **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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

9 **Why do some people object to wind turbines?**

A they use up the wind

B they produce carbon dioxide

C they spoil the view

D they only work at night

Understand It with Pulse | Flag a mistake

10 **A current of 4 A flows for 30 seconds. How much charge flows?**

A 60 C

B 120 C

C 130 C

D 240 C

Understand It with Pulse | Flag a mistake

11 **An object has a mass of 200 g and a volume of 20 cubic centimetres. What is its density?**

- **A** 20 g/cm³
- **B** 5 g/cm³
- **C** 220 g/cm³
- **D** 10 g/cm³

Understand It with Pulse | Flag a mistake

12 **Why is a short half-life source chosen for a medical tracer?**

- **A** so it is cheaper to make
- **B** so it stays in the body for years
- **C** it decays quickly
- **D** so it can be reused

Understand It with Pulse | Flag a mistake

13 **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

Understand It with Pulse | Flag a mistake

14 **Which type of radiation is used to take images of bones?**

- A infrared
- B microwaves
- C ultraviolet
- D X-rays

Understand It with Pulse | Flag a mistake

15 **A transformer has a primary voltage of 240 V. The number of turns on the secondary coil is 10 times smaller than on the primary coil. What is the secondary voltage?**

- A 48 V
- B 24 V
- C 2400 V
- D 250 V

Understand It with Pulse | Flag a mistake

16 **A satellite orbits at a radius of 100 km and takes 20 seconds for one orbit. Use pi = 3.14. What is its orbital speed?**

- A 36.4 km/s
- B 31.4 km/s
- C 15.7 km/s
- D 62.8 km/s

Understand It with Pulse | Flag a mistake

17 **A device transfers 500 J of energy in 50 seconds. What is its power?**

- A 20 W
- B 25000 W
- C 10 W
- D 5 W

Understand It with Pulse | Flag a mistake

18 **What does a thermistor do when its temperature rises?**

- A its resistance falls
- B it stops conducting at once
- C its resistance stays the same
- D its resistance rises

Understand It with Pulse | Flag a mistake

19 **How much energy is needed to change 3 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

A 501000 J

B 2004000 J

C 334003 J

D 1002000 J

Understand It with Pulse | Flag a mistake

20 **A radioactive sample has an activity of 400 Bq. What is its activity after 2 half-lives?**

A 50 Bq

B 200 Bq

C 400 Bq

D 100 Bq

Understand It with Pulse | Flag a mistake

21 **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

Understand It with Pulse | Flag a mistake

22 **Which electromagnetic wave has the highest frequency?**

A gamma rays

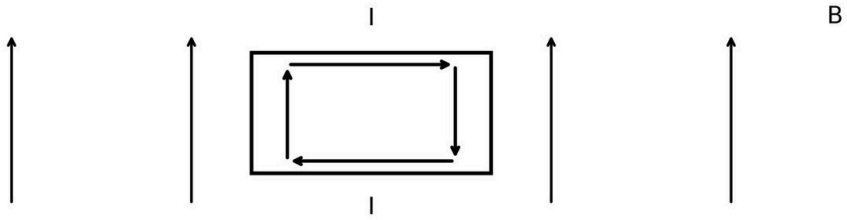
B radio waves, which are the lowest

C infrared

D microwaves

Understand It with Pulse | Flag a mistake

23 **The diagram shows a coil in a magnetic field with a current through it. What happens to the coil?**



- **A** it heats up
- **B** it stays still
- **C** it turns
- **D** it moves sideways

Understand It with Pulse | Flag a mistake

24 **What fuel does a main sequence star fuse?**

- **A** hydrogen
- **B** oxygen
- **C** carbon
- **D** helium, which is the product

Understand It with Pulse | Flag a mistake

25 **A 4 kg object is lifted 2 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- A 8 J
- B 160 J
- C 80 J
- D 40 J

Understand It with Pulse | Flag a mistake

26 **What is the unit of resistance?**

- A the volt
- B the ohm
- C the watt
- D the amp

Understand It with Pulse | Flag a mistake

27 **A 2 kg mass of ice melts. The specific latent heat of fusion of ice is 200 J/kg. How much energy is needed?**

- A 800 J
- B 500 J
- C 200 J
- D 400 J

Understand It with Pulse | Flag a mistake

28 **An atom has a mass number of 16 and an atomic number of 8. How many neutrons does it have?**

- A 8
- B 10
- C 9
- D 7

Understand It with Pulse | Flag a mistake

29 **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

Understand It with Pulse | Flag a mistake

30 **What is the normal in a refraction question?**

A the edge of the block

B the ray of light itself, in the glass

C at right angles to the surface

D a line along the surface

Understand It with Pulse | Flag a mistake

31 **What kind of current does a generator produce?**

A direct current only

B alternating current

C static charge

D no current at all

Understand It with Pulse | Flag a mistake

32 **About how far away is the nearest star after the Sun?**

A about 4 kilometres

B about 400 light-years

C about 4 million kilometres

D about 4 light-years

Understand It with Pulse | Flag a mistake

33 **A 4 kg block has a specific heat capacity of 200 J/kg degrees Celsius. Its temperature rises by 20 degrees Celsius. How much energy is needed?**

- A 32000 J
- B 8000 J
- C 16000 J
- D 16500 J

Understand It with Pulse | Flag a mistake

34 **What is the frequency of UK mains electricity?**

- A 100 Hz
- B 230 Hz
- C 50 Hz
- D 60 Hz

Understand It with Pulse | Flag a mistake

35 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

A 10

B 0

C 32

D 100

Understand It with Pulse | Flag a mistake

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

A particles move freely through space

B particles flow past each other easily

C particles are far apart from each other

D particles vibrate in fixed positions

Understand It with Pulse | Flag a mistake

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

A negative

B low

C high

D zero

Understand It with Pulse | Flag a mistake

38 **A guitar is plugged into an amplifier. What flows through the cable?**

A light

B electric current

C sound waves travelling along it

D water

Understand It with Pulse | Flag a mistake

39 **In Fleming's left-hand rule, what does the second finger show?**

A the current direction

B the direction the wire moves in

C the force direction

D the field direction

Understand It with Pulse | Flag a mistake

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

A it becomes zero

B it decreases

C it stays the same

D it increases

Understand It with Pulse | Flag a mistake

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

A elastic potential

B kinetic

C gravitational potential

D thermal

Understand It with Pulse | Flag a mistake

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

A the circuits

B the screen only

C the buttons only

D the case

Understand It with Pulse | Flag a mistake

43 **A hot air balloon is filled with hot air. Why does it rise?**

A hot air is colder

B hot air has no mass

C hot air is heavier than cold air

D hot air is less dense

Understand It with Pulse | Flag a mistake

44 **A sample's activity halves every 100 years. After 200 years, what fraction of the original activity remains?**

A 1

B 1/4

C 1/8

D 1/2

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

46 **Which electromagnetic waves are used for cooking food?**

- A X-rays
- B gamma rays
- C ultraviolet
- D microwaves

Understand It with Pulse | Flag a mistake

47 **A transformer has a primary voltage of 240 V. The secondary coil has 10 times fewer turns than the primary coil. What is the secondary voltage?**

- A 24 V
- B 250 V
- C 48 V
- D 2400 V

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

49 **Which energy resource will run out first?**

- A tidal power
- B solar power
- C a fossil fuel
- D geothermal power

Understand It with Pulse | Flag a mistake

50 **A device works at 230 V with a current of 5 A. What is its power?**

- A 1150 W
- B 2300 W
- C 575 W
- D 1160 W

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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