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PHYSICS **0625/13**

Paper 1 Multiple Choice (Core) **May/June 2026**

45 minutes

You must answer on the multiple choice answer sheet.

You will need: Multiple choice answer sheet
Soft clean eraser
Soft pencil (type B or HB is recommended)

INSTRUCTIONS

- There are **forty** questions on this paper. Answer **all** questions.
- For each question there are four possible answers **A**, **B**, **C** and **D**. Choose the **one** you consider correct and record your choice in soft pencil on the multiple choice answer sheet.
- Follow the instructions on the multiple choice answer sheet.
- Write in soft pencil.
- Write your name, centre number and candidate number on the multiple choice answer sheet in the spaces provided unless this has been done for you.
- Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- You may use a calculator.
- Take the weight of 1.0 kg to be 9.8 N (acceleration of free fall = 9.8 m / s^2).

INFORMATION

- The total mark for this paper is 40.
- Each correct answer will score one mark.
- Any rough working should be done on this question paper.

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1 A stone has an irregular shape.

View solution

Which apparatus is needed to find its volume?

A a thermometer

B a measuring cylinder

C a protractor

D a ruler

2 What is the definition of velocity?

View solution

A change in speed

B distance travelled divided by the time taken

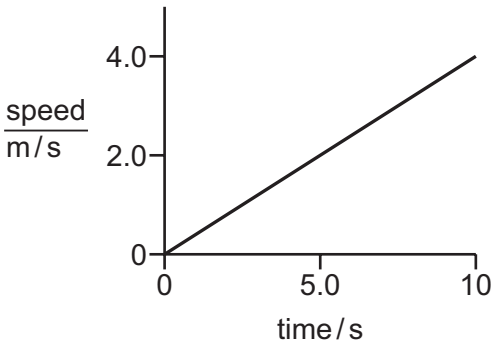
C magnitude of the speed

D speed in a given direction

3 Which speed–time graph is for an object that travels 20 m in 10 s?

View solution

A



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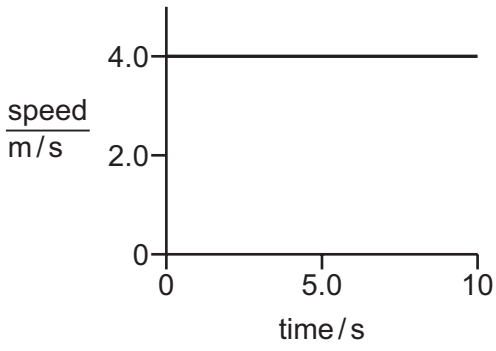

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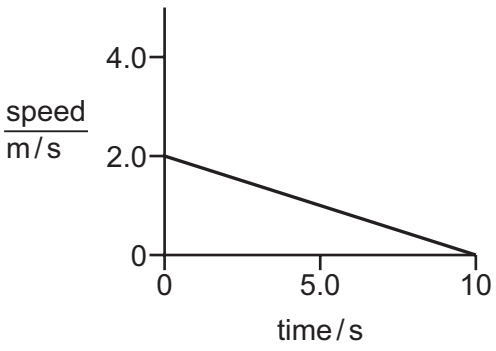
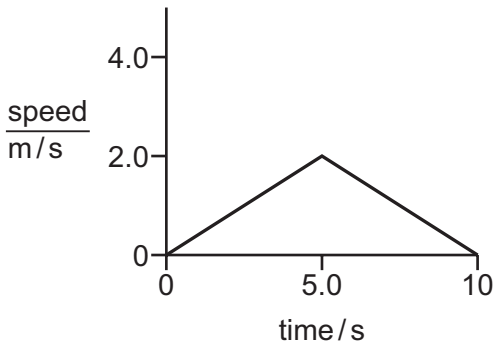


D



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4 Which row about weight and gravitational field strength is correct?

View solution

	weight is	gravitational field strength is
A	equivalent to the acceleration of free fall	the gravitational force per unit mass
B	equivalent to the acceleration of free fall	the gravitational force on an object
C	the gravitational force per unit mass	equivalent to the acceleration of free fall
D	the gravitational force on an object	the gravitational force per unit mass

5 The table shows the densities of three liquids.

View solution

liquid	density / g/cm^3
oil	0.8
water	1.0
brine	1.2

A student has four balls with different masses and volumes.

Which ball would float on brine but sink in oil and in water?

	mass / g	volume / cm^3
A	26	20
B	28	32
C	30	38
D	34	30

6 A turning effect of 25 N m is needed to loosen a nut on a car engine. A mechanic uses a spanner of length 30 cm.

View solution

What is the minimum force the mechanic must apply to the spanner to loosen the nut?

A 1.2 N **B** 7.5 N **C** 30 N **D** 83 N

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7 What is the name of the point through which the weight of an object appears to act?

View solution

A the centre of gravity

B the moment

C the pivot

D the turning point

8 An electric car is travelling at **constant** velocity along a straight horizontal road.

View solution

Which row shows the energy changes that are taking place?

	energy store decreasing	transfer process	energy store increasing
A	chemical	electrical	thermal
B	chemical	electrical	kinetic
C	electrical	mechanical	kinetic
D	electrical	mechanical	thermal

9 Which statement is correct?

View solution

A Energy is the power transferred per unit time.

B Energy is the time transferred per unit power.

C Power is the energy transferred per unit time.

D Power is the time transferred per unit energy.

10 Sea water is denser than fresh water.

View solution

Where is the pressure on a diver greatest?

A 10 m below the surface of a fresh-water lake

B 10 m below the surface of the sea

C 20 m below the surface of a fresh-water lake

D 20 m below the surface of the sea

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11 The air pressure in a car tyre is measured on a warm day. The pressure is then measured again during the cold night. The air pressure in the tyre has decreased. There are no air leaks in the tyre.

View solution

Why does the pressure decrease in the cold at night?

A The air particles in the tyre move more slowly.

B The air particles in the tyre stop moving.

C The volume of the air in the tyre decreases.

D The volume of the air in the tyre increases.

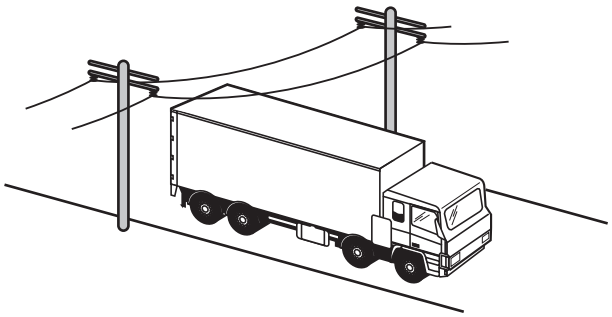
12 Which equation is used to convert temperatures between T in kelvin and θ in degrees Celsius?

View solution

A $\theta = T + 273$ **B** $\theta = T - 273$ **C** $\theta = 273 - T$ **D** $\theta = 273 \times T$

13 The diagram shows a lorry travelling under electricity transmission cables.

View solution



What is a possible hazard when the cables are too long?

A In cold conditions, the cables contract and might be hit by the lorry.

B In hot conditions, the cables expand and might be hit by the lorry.

C In cold conditions, the cables expand and break.

D In hot conditions, the cables contract and break.

14 Which statement is correct about the particles of a substance after condensation?

View solution

A They are close to each other and slide over each other.

B They are close to each other and vibrate about fixed points.

C They are far apart from each other and vibrate about fixed points.

D They are far apart from each other and move freely within the container.

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15 At the surface of a liquid, the more-energetic molecules can escape from the liquid into the atmosphere.

View solution

Which name is given to this process?

A boiling

B condensation

C evaporation

D melting

16 Convection is an important method of thermal energy transfer.

View solution

In which states of matter does convection occur?

A gases, liquids and solids

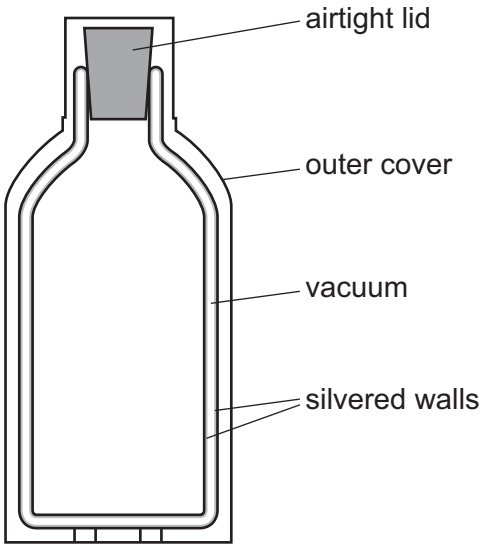
B gases and liquids only

C gases and solids only

D liquids and solids only

17 The diagram shows a vacuum flask used to keep a liquid warm.

View solution



Which methods of heat loss are reduced by the **vacuum** between the silvered walls?

A conduction only

B conduction and convection only

C convection and radiation only

D conduction, convection and radiation

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18 Waves transfer energy.

View solution

Which statement does **not** describe a wave?

A vibrations in the earth from an earthquake travelling to your feet

B light from a lamp travelling to your eye

C sound from a person singing travelling to your ear

D wind from a fan travelling to your face

19 The speed of sound in water is 1500 m / s.

View solution

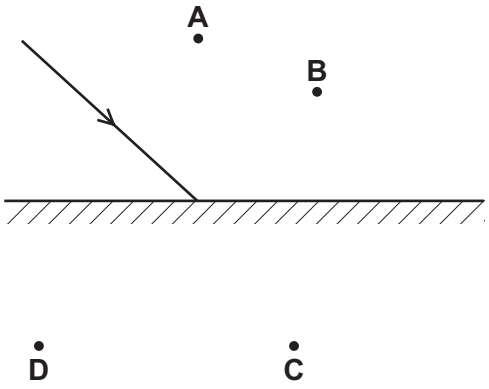
What is the wavelength in water of a sound of frequency 26 kHz?

A 17 mm **B** 58 mm **C** 17 m **D** 58 m

20 The diagram shows a ray of light striking a plane mirror.

View solution

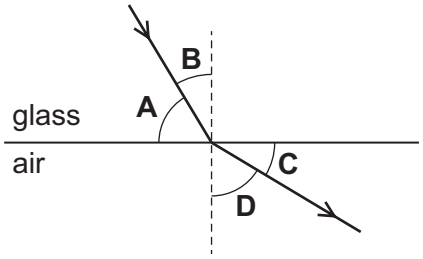
Through which point does the reflected ray pass?



21 A narrow beam of light travels through glass. It reaches the edge of the glass and refracts into the air.

View solution

What is the angle of refraction?



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22 Which list states three colours of the visible spectrum in order of decreasing frequency?

View solution

A red, yellow, blue

B orange, green, blue

C indigo, yellow, green

D violet, orange, red

23 Which region of the electromagnetic spectrum is between visible light and X-rays?

View solution

A gamma rays

B infrared

C radio

D ultraviolet

24 Which region of the electromagnetic spectrum is used to detect fake bank notes?

View solution

A microwaves

B radio

C ultraviolet

D X-rays

25 An audible sound wave and an ultrasound wave are travelling in air.

View solution

The table shows information about properties of the waves.

Which property gives possible correct information for both the audible sound wave and the ultrasound wave?

	property	audible sound	ultrasound
A	frequency	3.0 kHz	30 kHz
B	speed	330 m / s	3300 m / s
C	wavelength	1.0 m	10 m
D	wave type	longitudinal	transverse

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26 The hearing ranges of four animals are shown.

View solution

animal	lowest frequency / Hz	highest frequency / Hz
cow	25	35 000
dog	67	45 000
elephant	17	12 000
ferret	16	44 000

Which animals can hear both lower frequencies than a human and higher frequencies than a human?

A cow and dog

B dog only

C elephant and ferret

D ferret only

27 What is **not** an example of induced magnetism being used?

View solution

A using a compass needle to find the direction of the Earth's magnetic field

B magnetising a soft-iron bar by placing it in a strong magnetic field

C using an electromagnet to pick up pieces of scrap iron

D using a soft-iron core in a transformer

28 Which statement explains why copper is a good electrical conductor?

View solution

A Copper is a non-metal.

B Electrons can flow freely in copper.

C Particles in copper are closely packed.

D The density of copper is very low.

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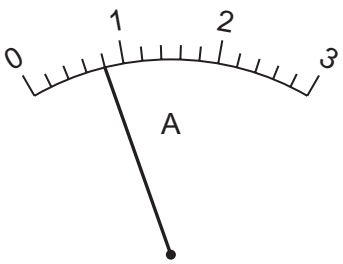
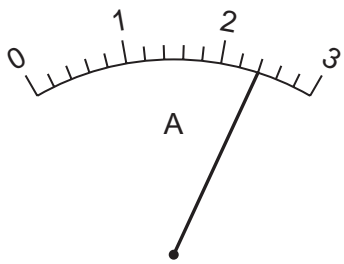
29 The readings on two ammeters are shown.

View solution

ammeter X



ammeter Y



Which statement about the readings is correct?

A The current shown on ammeter Y is 2.4 times larger than the reading on ammeter X.

B The current shown on ammeter Y is 3.0 times larger than the reading on ammeter X.

C The potential difference (p.d.) shown on ammeter Y is 2.4 times larger than the reading on ammeter X.

D The potential difference (p.d.) shown on ammeter Y is 3.0 times larger than the reading on ammeter X.

30 A lamp rated 12 V, 24 W operates at normal brightness.

View solution

How much energy is transferred by the lamp in 20 s?

A 1.2 J **B** 240 J **C** 480 J **D** 5800 J

31 A length of metal wire is used as a resistor in a circuit.

View solution

Which change results in an increase in current in the circuit?

A connecting a second identical length of wire in parallel with the original wire

B connecting a second identical length of wire in series with the original wire

C decreasing the thickness of the wire

D increasing the length of the wire

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32 A teacher asks, ‘Why do we put a fuse in a mains circuit?’

View solution

Student 1 says, ‘It protects the wiring from overheating.’

Student 2 says, ‘It protects us from getting a shock if we touch the live wire.’

Who is correct?

A both students

B neither student

C student 1 only

D student 2 only

33 The circuits in a house are protected by trip switches.

View solution

A trip switch is connected to an electric shower that uses 50 A.

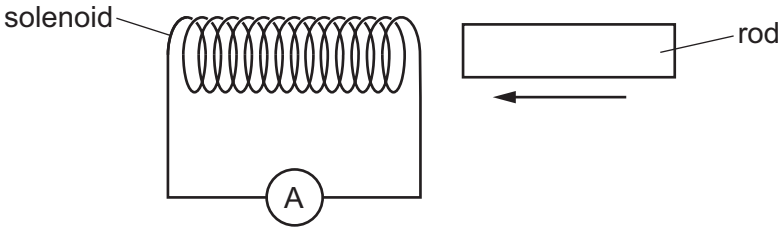
Which trip switch rating is most suitable?

A 5.0 A **B** 50 A **C** 60 A **D** 90 A

34 A solenoid is connected to a very sensitive ammeter. A rod is inserted into one end of the solenoid.

View solution

The ammeter shows that there is a small electric current in the solenoid while the rod is moving.



Which rod is being inserted?

A a heated copper rod

B a magnetised steel rod

C an uncharged nylon rod

D a radioactive uranium rod

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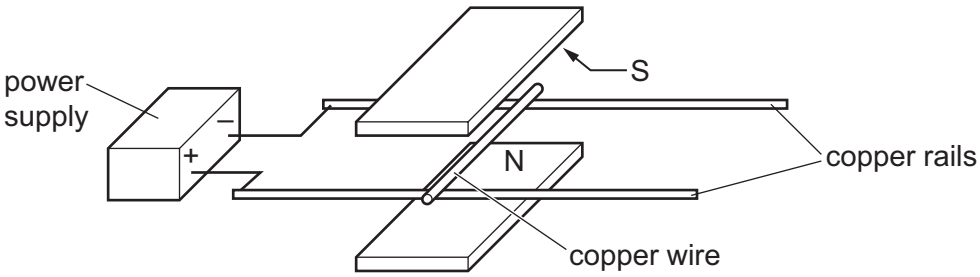
35 The diagram shows two horizontal copper rails connected to a d.c. power supply.

View solution

A thin piece of copper wire rests on the rails in a vertical magnetic field.



When the power supply is switched on, the thin piece of copper wire experiences a force to the right.

The magnetic field and the connections to the power supply are both reversed.

What now is the direction of the force on the thin piece of copper wire?

A to the left

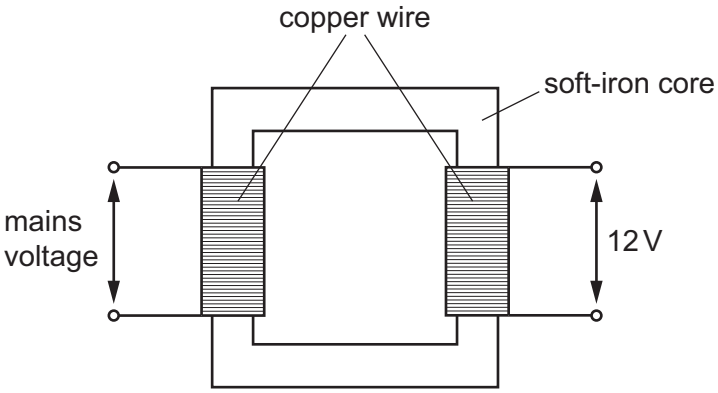
B to the right

C downwards

D upwards

36 The step-down transformer shown reduces mains voltage to 12 V.

View solution



When the transformer is used, some energy is transferred to the surroundings.

Which energy store of the surroundings increases?

A chemical

B nuclear

C thermal

D elastic

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37 How do atoms form positive ions?

View solution

A by gaining electrons

B by gaining neutrons

C by losing electrons

D by losing protons

38 Which statement is correct for an α-particle?

View solution

A It contains two neutrons.

B It has a charge of –2.

C It is **not** very ionising.

D It is very penetrating.

39 Which statement about α-particles and γ-rays is correct?

View solution

A α-particles are a form of electromagnetic radiation.

B α-particles penetrate materials more easily than γ-rays.

C The emission of an α-particle produces a nucleus of a different element.

D γ-rays are more ionising than α-particles.

40 The diameter of the Milky Way is approximately .....1..... .....2..... .

View solution

Which row correctly completes the sentence?

	1	2
A	100 000	kilometres
B	100 000 000	kilometres
C	100 000	light-years
D	100 000 000	light-years

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