

Section A

Answer all questions.

Put a **circle** around the correct option.

1.

What is this equipment used for?

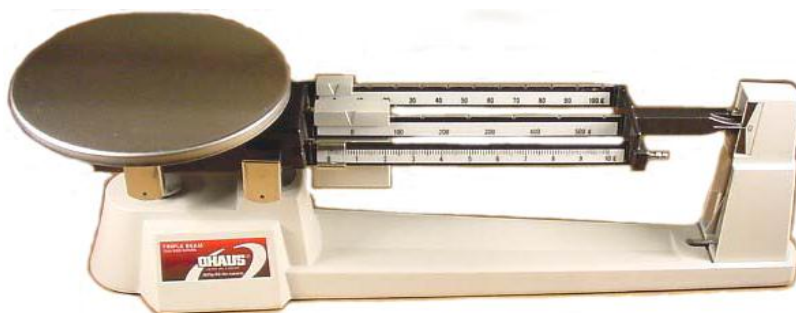


- A. Weight
- B. Length**
- C. Volume
- D. Time

(1 mark)

2.

This equipment is used to measure?

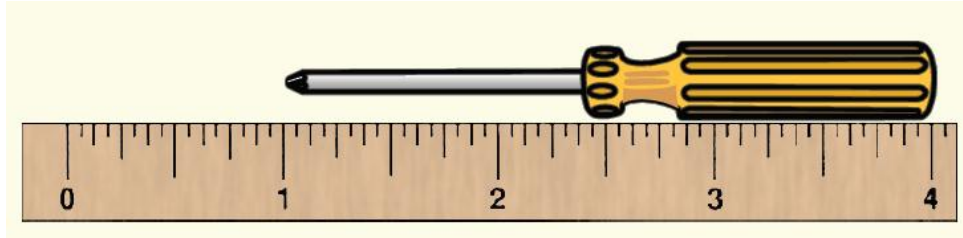


- E. Mass**
- A. Length
- B. Time
- C. Weight

(1 mark)

3.

This is a screw driver on a ruler. What is the length of the screw driver?



(it starts from 1 not zero)

- A. 4cm
- B. 4m
- C. 3km
- F. **3cm**

(1 mark)

4.

6000 minutes is how many hours?

$$6000 \div 60 = 100 \text{ hours}$$

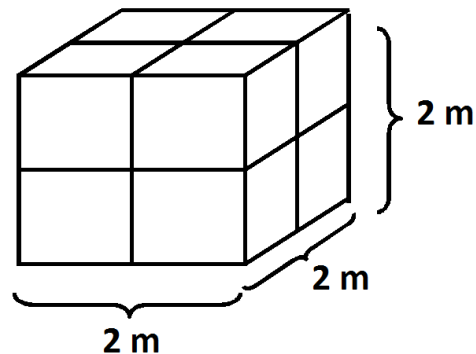
- A. 100 hours**
- B. 1000 hours
- C. 10 hours
- D. 10,000 hours

(1 mark)

5.

What is the volume of this cube?

$$\text{Volume} = 2 \times 2 \times 2 = 8 \text{ m}^3$$

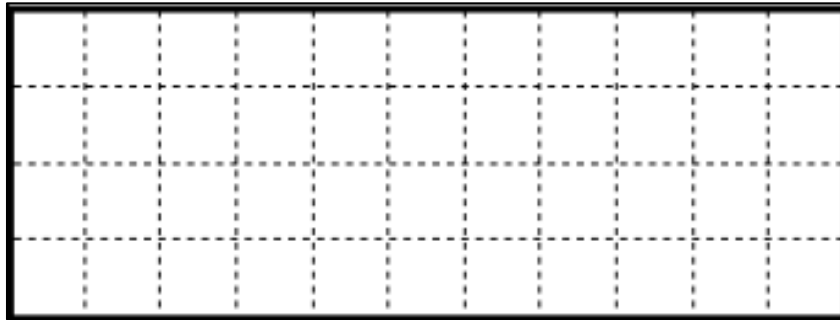


- A. 8m^3**
- B. 6m^3
- C. 4m^3
- D. 2m^3

(1 mark)

6.

What is the area of the rectangle if every small square has an area of 2cm^2 ?



$(4 \times 11) \times 2 = 44 \times 2 = 88 \text{ cm}^2$

- A. 44cm^2
- B. 22cm^2
- C. 88cm^2**
- D. 15cm^2

(1 mark)

7.

Which of these is the proper unit for the mass of a man?

- A. Meter square
- B. Kilogram**
- C. Cubic centimeter
- D. Millimeter

(1 mark)

8.

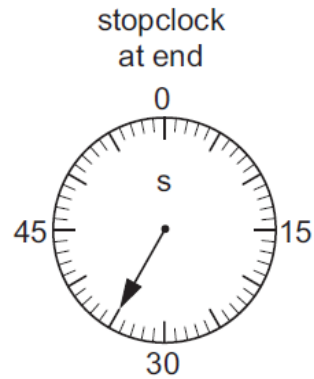
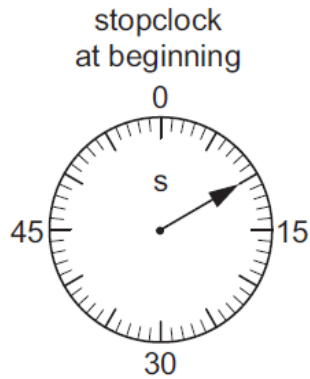
Which of these is a unit of volume?

- A. g^2
- B. m^2
- C. kg^3
- D. cm^3 or m^3**

(1 mark)

9.

The diagrams show the times on a stop clock at the start and end of an experiment.



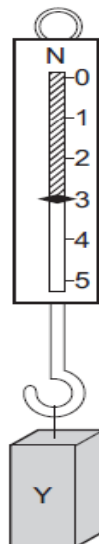
How long did the experiment take?

(35-10= 25)

- A. 10s
- B. 25s**
- C. 35s
- D. 45s

(1 mark)

10. What is this instrument called?

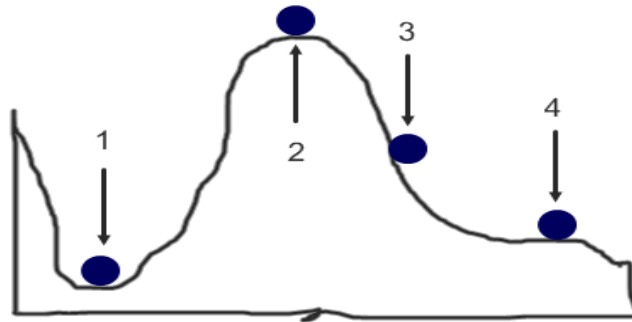


- A. Micrometer
- B. Beam balance
- C. Spring balance**
- D. Vernier Caliper

(1 mark)

21.

In the picture below, in which position does the ball have the lowest potential energy?



Remember :- **(The lowest PE is the lowest in height, the highest KE is the highest in speed/velocity)**
(The highest PE is the highest in height, and the lowest KE is the lowest in speed/velocity)

- A. **1**
- B. 2
- C. 3
- D. 4

(1 mark)

22.

Energy stored in petrol is?

- A. **Chemical energy**
- B. Petroleum energy
- C. Electrical energy
- D. Mechanical energy

(1 mark)

23.

What type of energy is delivered by a battery?



- A. Kinetic energy
- B. Mechanical energy
- C. Electrical energy**
- D. Chemical energy

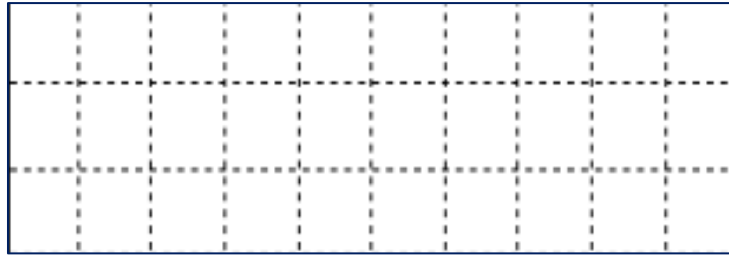
(1 mark)

Section B

Write your answers on the spaces provided.

1.

The diagram is a rectangle . Each small square has area of 4cm^2 .

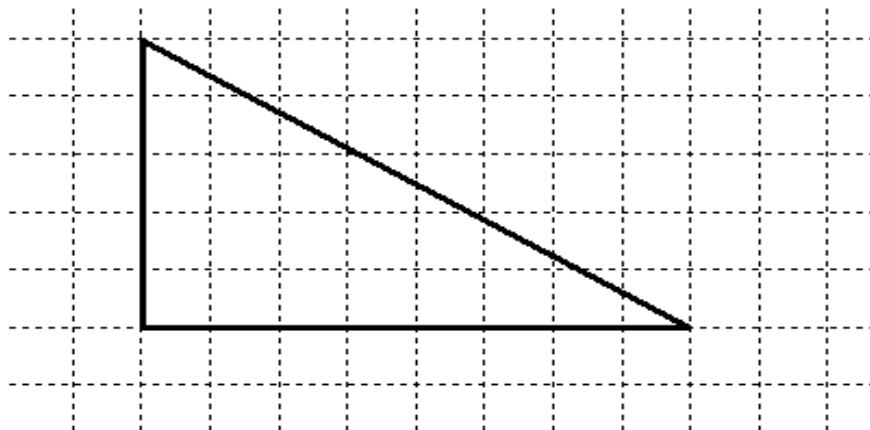


A) What is the area of the rectangle?

$$\begin{aligned}
 &10 \times 3 = 30 \text{ squares} \\
 &\text{Each square is } 4 \text{ cm}^2 \\
 &\text{Area} = 30 \times 4 = 120 \text{ cm}^2
 \end{aligned}$$

(2 marks)

B) What is the area of the triangle? Each small square has an area of 4cm^2 .



$$\begin{aligned}
 \text{Number of squares} &= \frac{8 \times 5}{2} = \frac{40}{2} = 20 \text{ squares} \\
 \text{Area} &= 20 \times 4 \text{ cm}^2 = 80 \text{ cm}^2
 \end{aligned}$$

(3 marks)

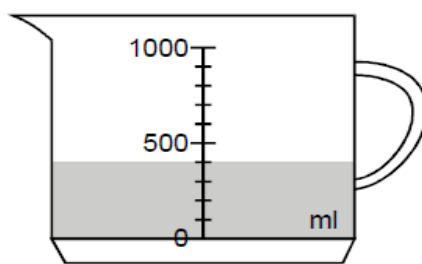
2.

A) **Underline the correct word** using either mass or weight.

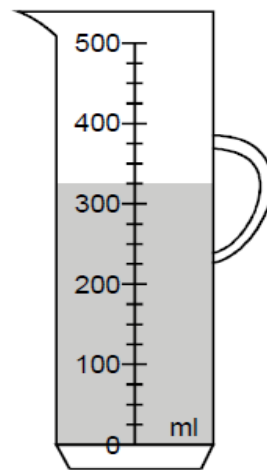
1. (Mass, **Weight**) is “the force on the object caused by a gravitational field”.
2. (**Mass**, Weight) of an object on moon is the same as on a earth.
3. (**Mass**, Weight) is “the amount of matter in the body.

(3 marks)

B) On What are the readings on jugs A and B?



Jug A



Jug B

400 ml

325 ml

(2 marks)

c) These devices transfer electrical energy into other forms of energy. Choose a word from the box that indicates the energy type given by each device.

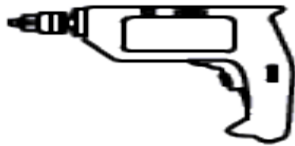
Heat Energy Kinetic Energy Sound Energy Light Energy

Bedside Lamp



Light Energy

Drill



Kinetic Energy

Iron



Heat Energy

Bell



Sound Energy

(2 marks)

Section A

Answer all questions.

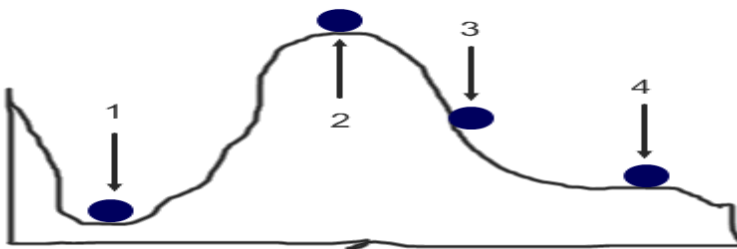
Circle the correct answer.

(1 mark for each correct answer)

1. A moving object has

- A. kinetic energy**
- B. potential energy
- C. both kinetic and potential energy
- D. neither kind of energy

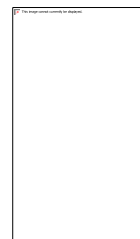
2. In the picture below, in which position does the ball have the greatest Kinetic energy?



- A. 1
- B. 2**
- C. 3
- D. 4

3. The energy stored inside a battery is

- A. kinetic energy
- B. chemical energy**
- C. both kinetic and potential energy
- D. light energy



4. What energy transformation(s) take(s) place when you strike and light a match?

- A. chemical to nuclear energy
- B. mechanical to thermal energy
- C. chemical to thermal**
- D. electromagnetic to potential energy



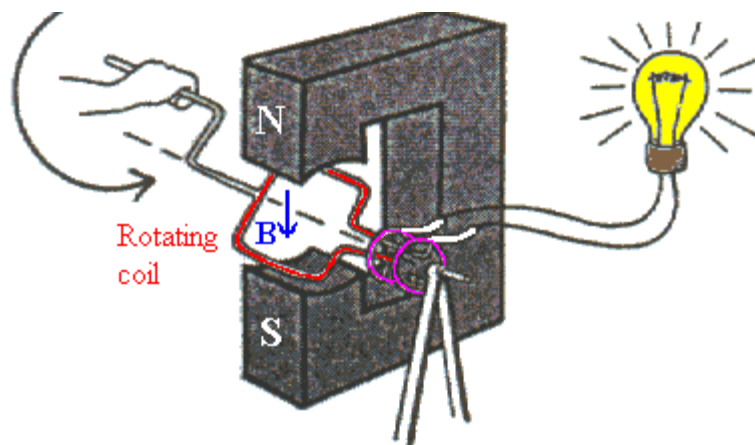
5. A scientific rule that states that energy cannot be destroyed or created is called the law of

- A. conquering of energy
- B. Conservation of energy**
- C. chemical energy
- D. constructive energy

Section B

Write your answers on the spaces provided.

A.



1) What is the name of the device shown in the picture above?

Answer **Dynamo**

[1]

2) What is the input energy?

Answer **Kinetic energy**

[1]

3) What is the output energy?

Answer **Potential Energy**

[1]

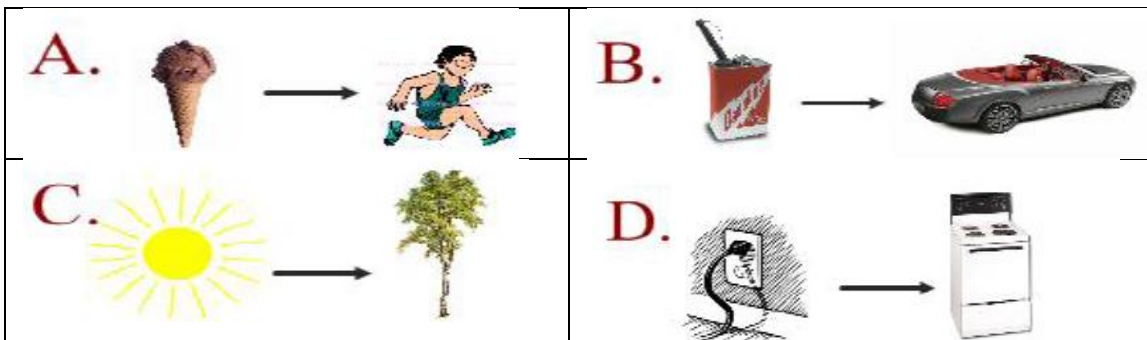
4) Choose a component from the table below that shows where the output energy occur.

Magnet	Connecting Wires	Bulb
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Answer **Bulb**

[1]

B.



From this list **choose** the best option that best describes these forms of energy transfer.

1- Electrical to thermal energy

Answer **D**

[1]

2- Chemical to mechanical energy


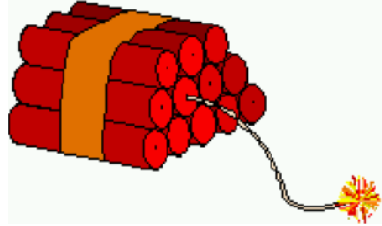
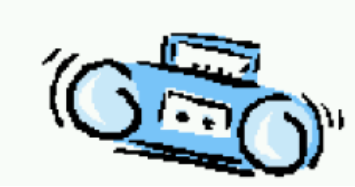


Answer **B or A**

[1]

C.

Match the energy transformations below with the objects.

The first question is done for you.

<p>A.</p> 	<p>B.</p> 	<p>C.</p> 
<p>D.</p> 	<p>E.</p> 	

Energy transfer	Object
Chemical potential energy → Heat and light energy	E
Electrical energy → Sound energy	C
Chemical potential energy → Heat, light, sound and kinetic energy	B
Gravitational potential energy → kinetic and Sound energy	A
Chemical potential energy → Heat and kinetic energy	D

(1 mark each)



D.

Fill-in the spaces with the correct answers from the table below.

Chemical	Kinetic	Nuclear	Joule
Potential	Mechanical	Work	

- a) Fission and fusion are examples of **Nuclear** Energy. [1]
- b) The unit for Energy is **Joule (J)** [1]
- c) The energy stored in petroleum and coal is stored in the form of **Chemical** energy. [1]
- d) Kinetic Energy + Potential Energy = **Mechanical** energy. [1]
- e) Energy is the ability to do **Work** [1]
- f) The energy of position such as a rock on a hill is **Potential** energy [1]
- g) Movement of object from place to place is **Kinetic** energy [1]