



**SMJK YU HUA KAJANG
PHYSICS HOMEWORK
CHAP 1 MODULE 1– MEASUREMENTS
STRUCTURE QUESTIONS**

Download the questions, print them and answer.

Paper 2

(21 marks)

Time: 1 HOUR

This paper consists of **5** questions. Answer **all** questions. Write your answer clearly in the spaces provided in the question paper. If you wish to change your answer, erase the answer that you have done. Then write down the new answer. The diagrams in the questions provided are not drawn to scale unless stated. The marks allocated for each question are shown in brackets. This question paper must self-printed, answered and handed back to school.

1 Diagram 1.1 shows an electric circuit.

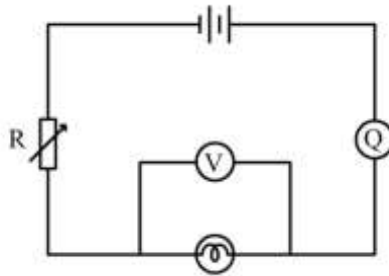


Diagram 1.1

(a) (i) Name instrument Q.

_____ [1 mark]

(ii) What is the function of R in the circuit?

_____ [1 mark]

(b) Diagram 1.2 shows two types of voltmeters, X and Y, that can be used in the circuit in Diagram 1.

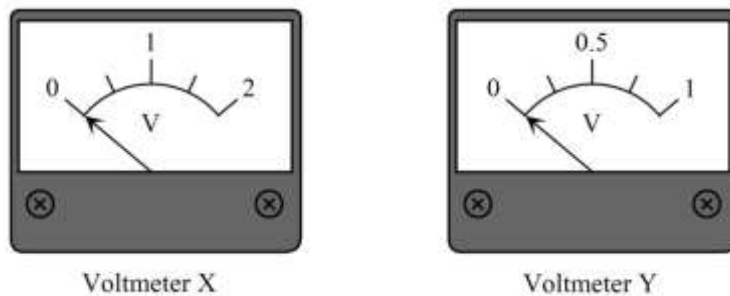


Diagram 1.2

(i) Which voltmeter is more sensitive?

_____ [1 mark]

(ii) State **one** reason for your answer in 1(b)(i).

Answer:

[1 mark]

2 Diagram 2 shows the scale of a voltmeter.

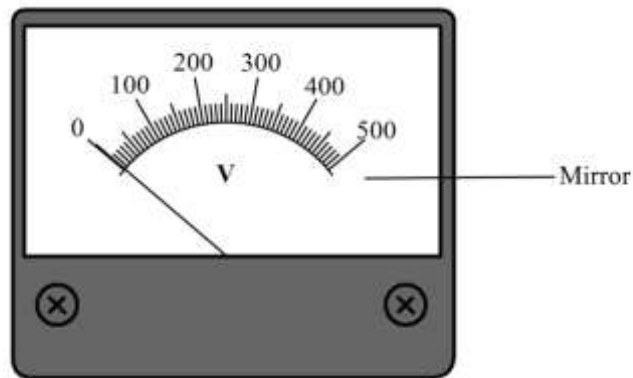


Diagram 2

(a) Name the physical quantity measured by the voltmeter.

[1 mark]

(b) In the space below, draw the symbol for a voltmeter.

[1 mark]

(c) What is the value of the smallest division on the scale?

_____ A

[1 mark]

(d) State the function of the mirror located under the scale.

[1 mark]

Answer:

3 Diagram 3 shows an oscillating pendulum.

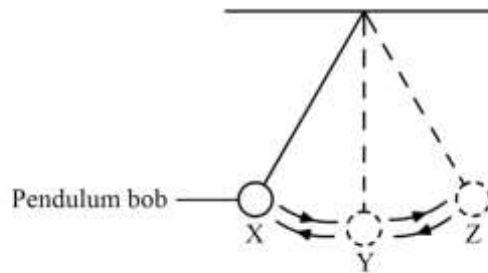


Diagram 3

- (a) Based on Diagram 3, write the correct path for one complete oscillation.

[1 mark]

- (b) The time taken for a pendulum to make 64 complete oscillations is 64 s.
What is the time taken for 8 complete oscillations?

[2 marks]

- (c) What is the type of physical quantity for time?

Tick (✓) the correct answer in the box provided.

Scalar quantity

Vector quantity

[1 mark]

Answer:

- 4 (a) Categorize the following physical quantities into base quantity and derived quantity.

Electric current	Velocity	Speed
Temperature	Mass	Pressure

- (i) Base quantity

[1 mark]

- (ii) Derived quantity

[1 mark]

- (b) Table 1 shows four physical quantities and their SI units. Complete the table.

Physical Quantities	Type of quantity	SI unit
Force	Vector	kg m s^{-2}
Acceleration		
Power		
Work done		

Table 1

[3 marks]

Answer:

5 Diagram 4.1 shows a vernier caliper is used to measure the thickness of 9 coins.

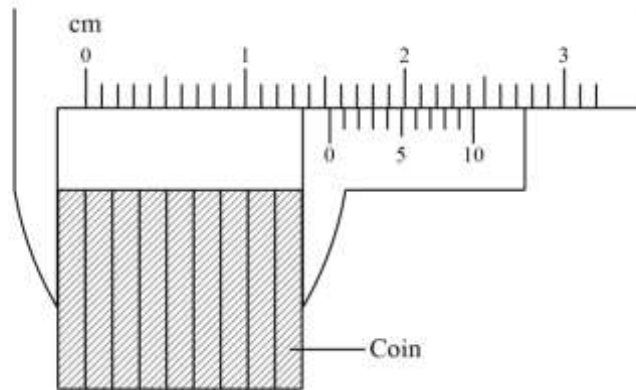


Diagram 4.1

(a) (i) What is the sensitivity of a vernier caliper?

Tick (✓) the correct answer in the box provided.

0.01 cm

0.001 cm

[1 mark]

(ii) What is the thickness of 3 coins?

_____ [1 mark]

(b) Diagram 4.2 shows the thickness of a piece of coin measured by two micrometer screw gauges, P (without zero error) and Q (with zero error).

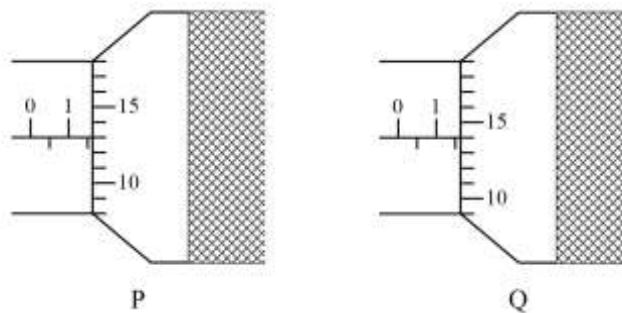


Diagram 4.2

(i) What is the zero error of Q?

_____ [1 mark]

(ii) The actual thickness of the coin is

_____ [1 mark]

Answer: