

Name.....

Index No.....School.....

Date.....Signature.....

448/2
ELECTRICITY
(Practical)
Paper 2
Time: 2 ½ hours
December 2021

BUNAMFAN CLUSTER EXAMINATION 2021

448/2
ELECTRICITY
(Practical)
Paper 2
2021
Time: 2 ½ hours
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INSTRUCTIONS TO CANDIDATES

Candidates should have the following for this examination

1. This paper has **THREE** exercises.
2. Each exercise is allocated **30 minutes**.
3. All dimensions are in **millimeters unless stated otherwise**.
4. The paper consists of **6 printed pages**.
5. Candidates should check the question paper to ensure that all the papers are printed as indicated and no exercises are missing

EXERCISE 1

The diagram in figure 1 below shows a wooden block. Using the drawing paper and instruments provide, draw in third angle the orthographic projection. (20 marks)

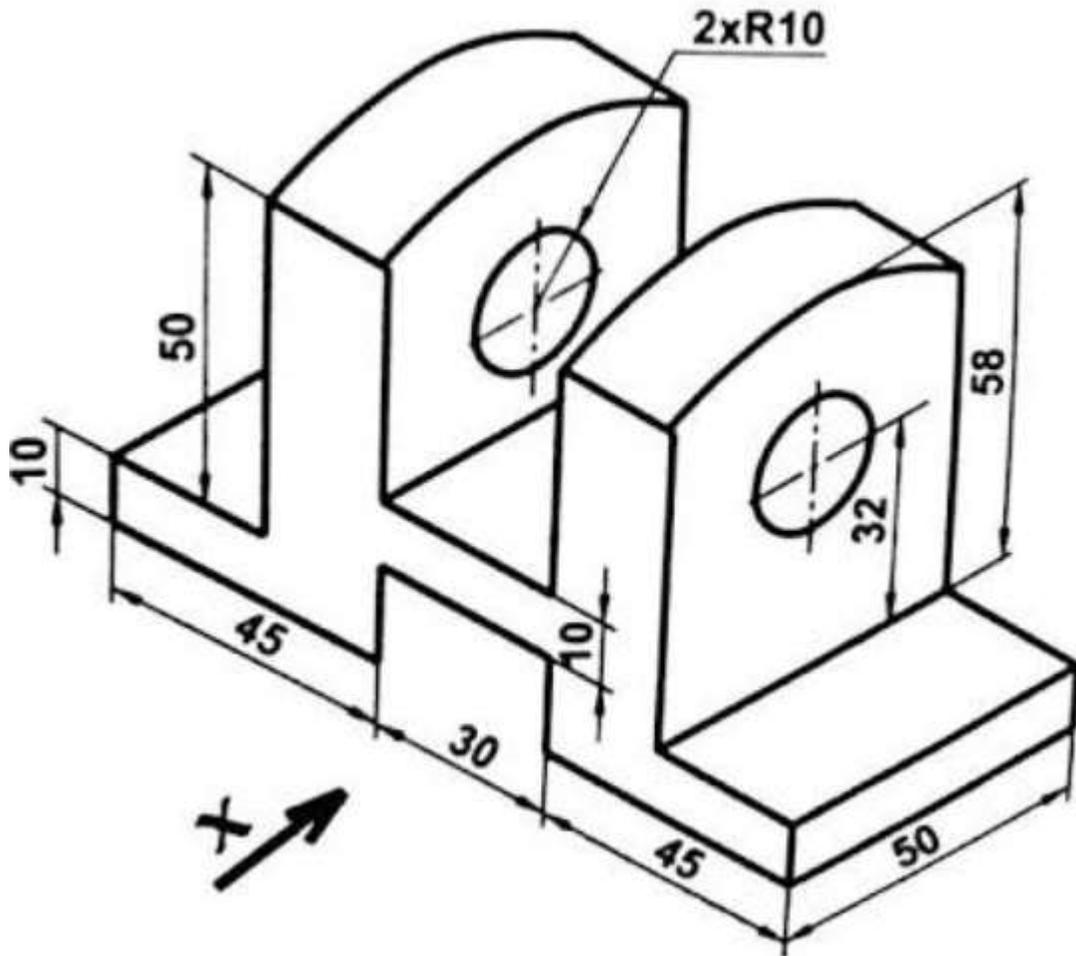


Figure 1

EXERCISE 2

Using the materials, tools and equipment provided, fabricate the stand as shown in the figure 2 below. (20 marks)

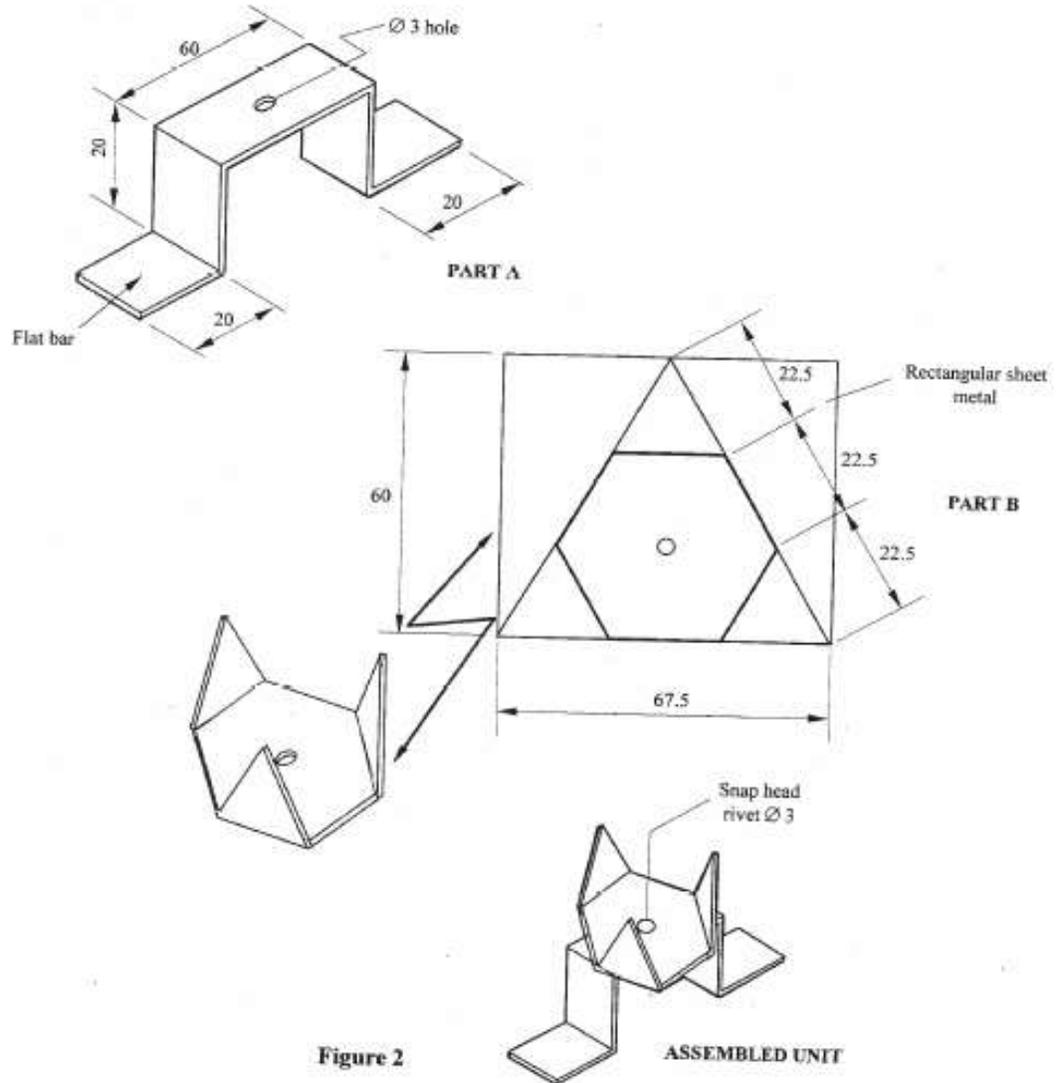
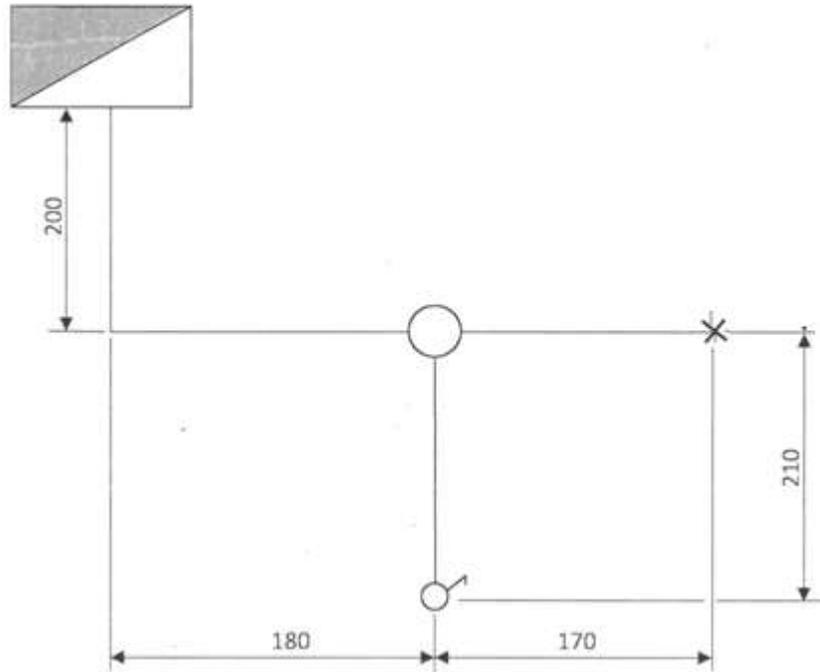


Figure 2

EXERCISE 3

Figure 3 below shows a lighting circuit. Using materials, tools and equipment provided, install the circuit such that the switch controls the lamp. (20 marks)



EXERCISE 4

Using materials, components and equipment provided, perform the following tasks.

- (i) Correct the circuit shown in figure 1. (3 marks)

Let the examiner check your work.

Potentiometer

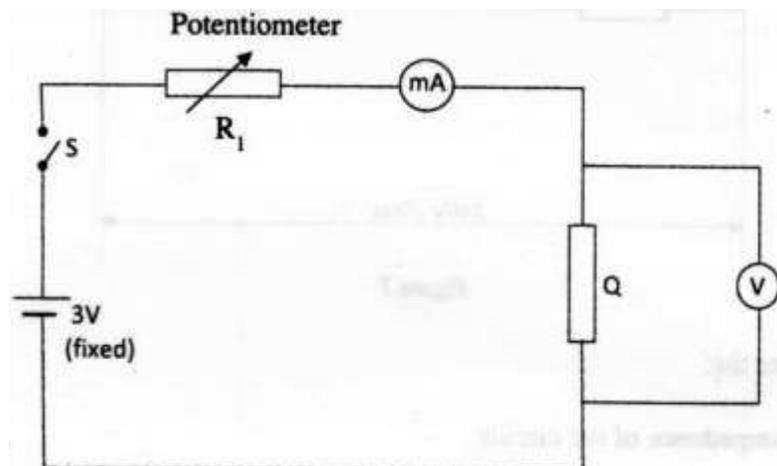


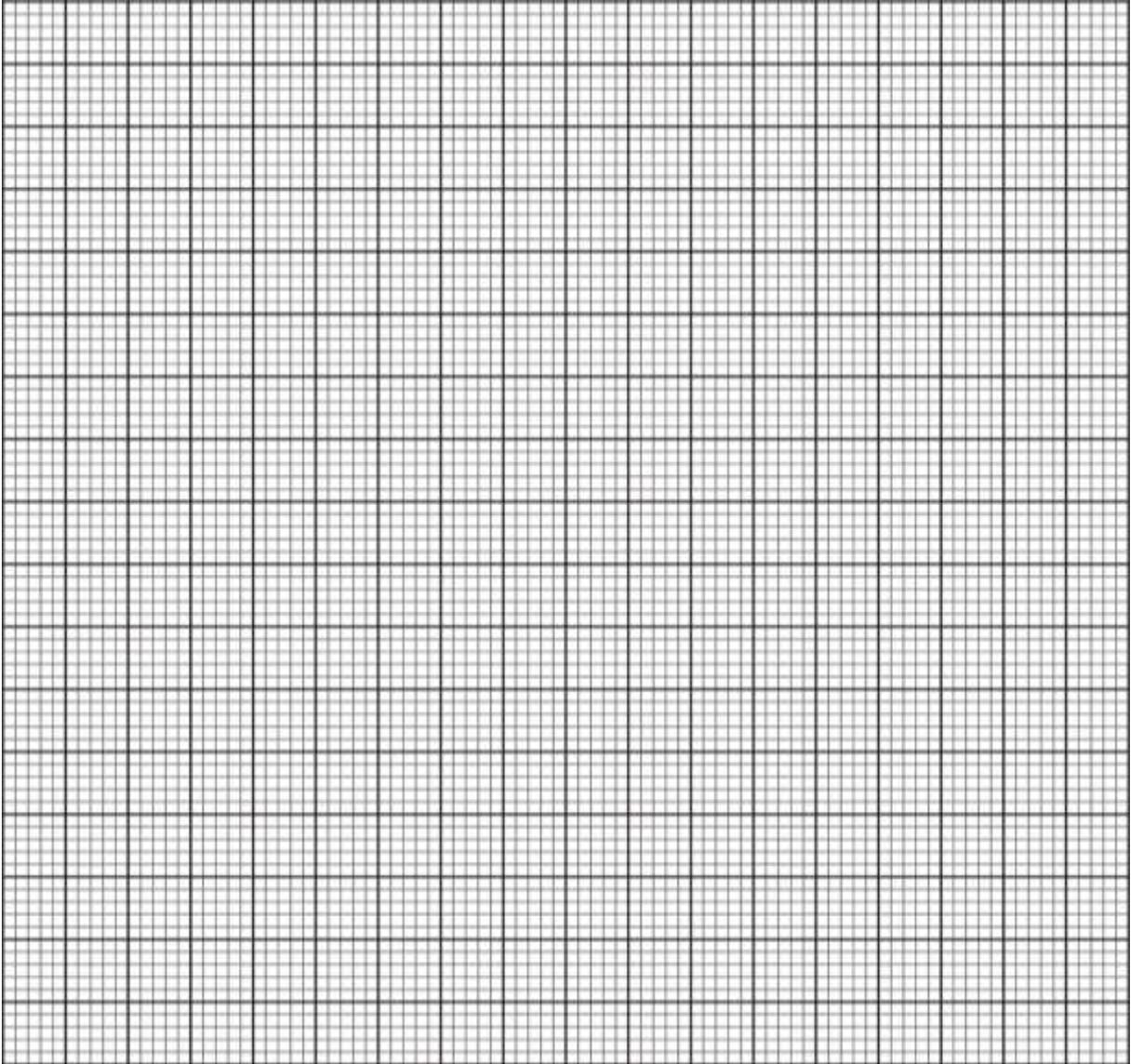
Figure 1

- (ii) Close switch S.
- (iii) Adjust the potentiometer for the ammeter to obtain current values in table 1 and in each case record the corresponding voltage values. (7 marks)

Current I(mA)	20	40	60	100	140
Voltage(V)					
$\frac{V}{I} (V^{-1})$					

- (iv) Calculate the values of V/I and record them in the spaces provided in the table.

(v) Use the values in the table to draw a graph of voltage against current.



(vi) Determine the slope of the graph. (2 marks)

(vii) From the graph, determine the voltage, V when the current $I = 160\text{mA}$.

$V = \dots\dots\dots$ (1 mark)

(viii) State the purpose of the experiment. (1 mark)

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