

# **BUNAMFAN CLUSTER EXAMINATION – 2022**

Kenya Certificate of Secondary Education

**447/2 – POWER MECHANICS – Paper 2**  
**(PRACTICAL)**

**June 2022 - 2 ½ hours**

**Name.....Adm No.....**

**Class..... Date.....**

## **Instructions to candidates**

- a) This paper consists of 10 questions named stations.
- b) Answer all questions.
- c) All the questions have equal marks.
- d) Do not spend more than 15 marks per station.
- e) Once you leave a station, you will not be allowed back to the same station.
- f) This paper consists of 8 printed pages. Ensure that all questions are present.

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**STATION 1**

**INSTRUCTIONS**

Draw an assembled valve train system.

(10mks)

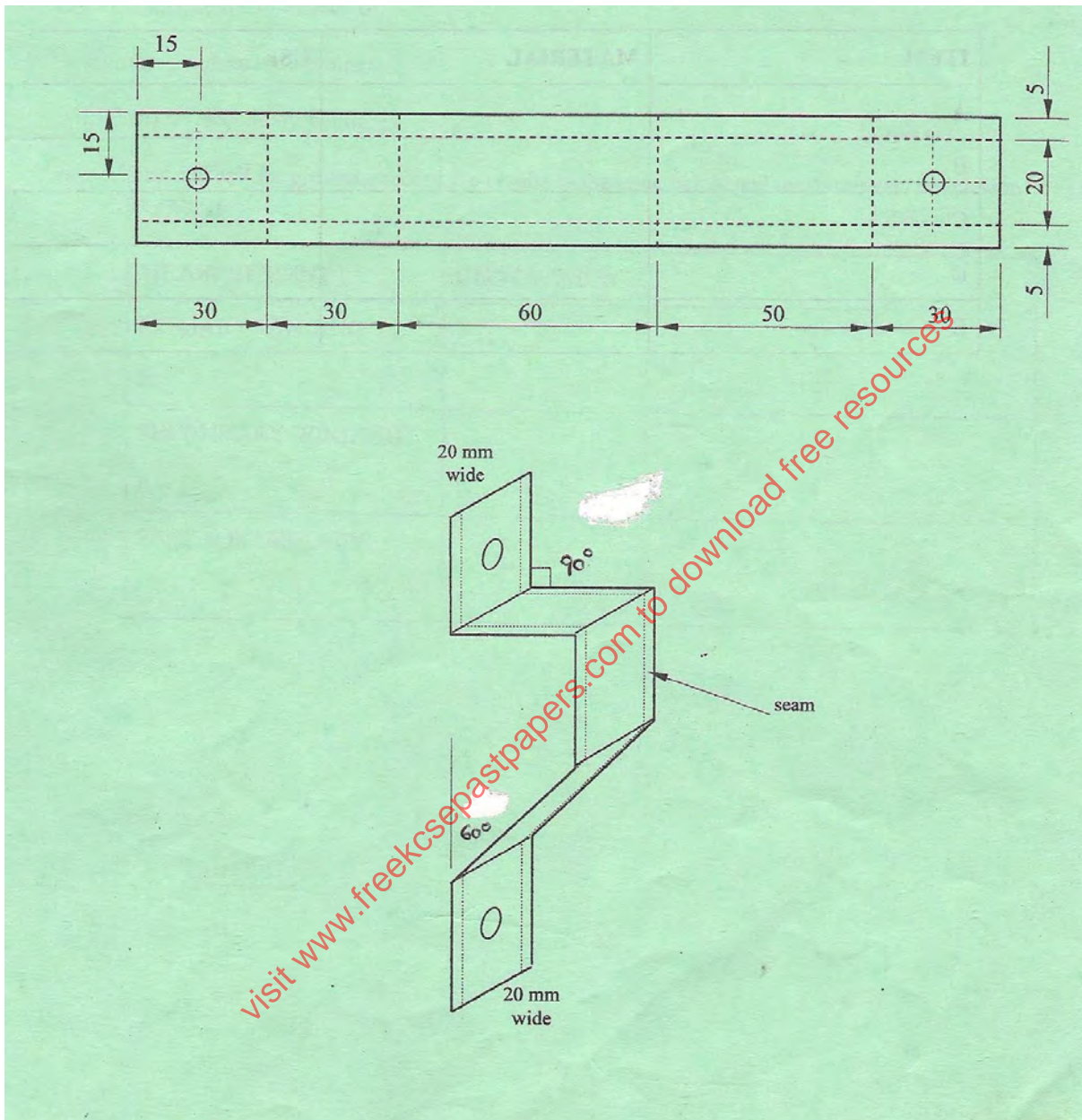
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## STATION 2

### INSTRUCTIONS

Using the tools, equipment and materials provided, make the handle as shown in the figure below.

(10mks)



### STATION 3

#### INSTRUCTIONS

Identify the items labeled A to E. State the material each is made of and one use of each part in a motor vehicle (10mks)

ITEM	MATERIAL	USE
A		
B		
C		
D		
E		

### STATION 4

#### INSTRUCTIONS

Provided on the bench are hand tools used in mechanics. Study them and fill the table below appropriately. (10mks)

TOOL	NAME	USE
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		

## STATION 5

### INSTRUCTIONS

Using tools and gear oil pump provided, carry out the following tasks;

- a) Dismantle the pump
- b) Perform necessary service checks
- c) Assemble the pump

(10mks)

**Let the examiner check your work**

## STATION 6

### INSTRUCTIONS

Identify the motor vehicle parts labelled J, K, L, M and N. Name each part, state the vehicle system it belongs to and state its main function in a motor vehicle. (10marks)

PART	NAME	VEHICLE SYSTEM	FUNCTION
J			
K			
L			
M			
N			

**STATION 7**

**INSTRUCTIONS**

On the single engine provided;

- a) Remove the exhaust valve.
- b) Measure and record the exhaust valve diameter.

\_\_\_\_\_mm

- c) Name the tool you have used to take the reading.

\_\_\_\_\_

- d) Assemble back the engine.

**Let the examiner check your work.**

(10mks)

**STATION 8**

**INSTRUCTIONS**

Study the welding equipment provided. Name and state the function of the parts labeled. (10mks)

PART	NAME	FUNCTION
P		
Q		
R		
S		
T		

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**STATION 9**  
**INSTRUCTIONS**

- a) Take the following measurements of the marked parts of the camshaft provided. (7mks)  
i) Camlobe height using vernier calipers.

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- ii) Camlobe diameter using micrometer provided

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- iii) Journal ovality using dial indicator.

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- b) State the accuracy of each of the following tools. (3mks)

i) Vernier calipers\_\_\_\_\_

ii) Micrometer\_\_\_\_\_

iii) Dial indicator\_\_\_\_\_

**STATION 10**

**INSTRUCTIONS**

Connect correctly the battery ignition circuit, using the components of the ignition system laid on the bench. (10mks)

**Let the examiner check your work.**

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