

3.20.2 Power Mechanics Paper 2 (447/2)

STATION 1

In the space below, sketch in good proportion an **exploded view** of the **piston-connecting rod assembly**.

Label any **six** parts.

(10 marks)

STATION 2

Instructions

Using the tools, equipment and materials provided, make the handle shown in **Figure 1**.

(10 marks)

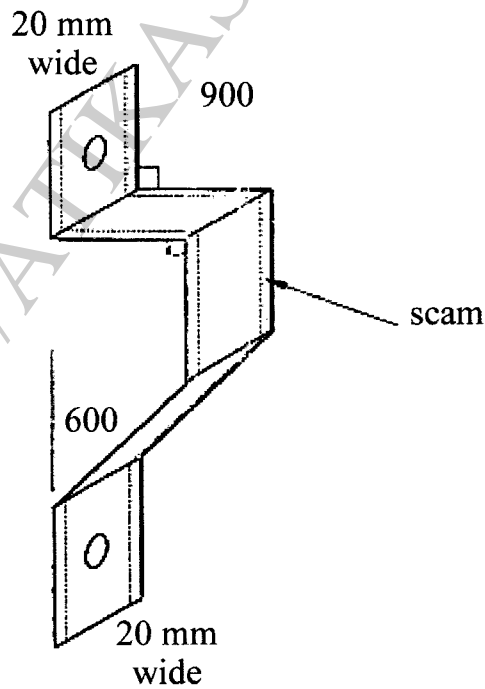
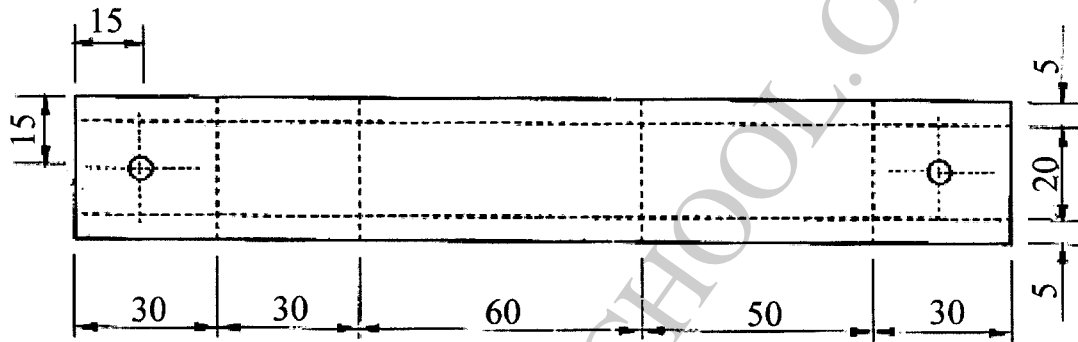


Figure 1



STATION 3

Identify the items labelled **A, B, C, D** and **E**. For each item, **state the material** it is made of and **one use** in a motor vehicle. Complete the table below. (10 marks)

ITEM	NAME	MATERIAL	USE
A			
B			
C			
D			
E			

STATION 4

Using the tools, equipment and the single cylinder engine provided, carry out the dry compression test. Make a comment about the readings obtained to the examiner. (10 marks)

STATION 5

Using the materials and components provided, connect the four lamp lighting circuits such that each lamp gives maximum illumination. Let the examiner see your work. (10 marks)

STATION 6

Using the tools and materials provided, cut the gasket to fit the surface of the component provided, cut the gasket to fit the surface of the component provided. (10 marks)

STATION 7

Name the parts labelled **V, W, X, Y** and **Z**. For each part, identify **one defect** and state **its effect** on vehicle operation. (10 marks)

PART	NAME	DEFECT	EFFECT
V			
W			
X			
Y			
Z			



STATION 8

Dismantle the oil pump provided. Measure and record the following;

- (i) Rotor body clearance
- (ii) Rotor tip clearance

Re-assemble the pump and test it for functionality.

(10 marks)

LET THE EXAMINER SEE YOUR WORK.

STATION 9

On the single cylinder engine provided,

- (a) Remove the exhaust valve and replace it with the one provided. Let the examiner check your work.
- (b) Measure and record exhaust valve clearance

(10 marks)

STATION 10

On the multi-cylinder engine provided, carry out the following tasks:

- (a) Remove spark plug for cylinder number 2;
- (b) Check its condition and explain to the examiner;
- (c) Service the spark plug;
- (d) Replace the spark plug.

(10 marks)

LET THE EXAMINER CHECK YOUR WORK.

