3.19.2 Power Mechanics Paper 2 (447/2)
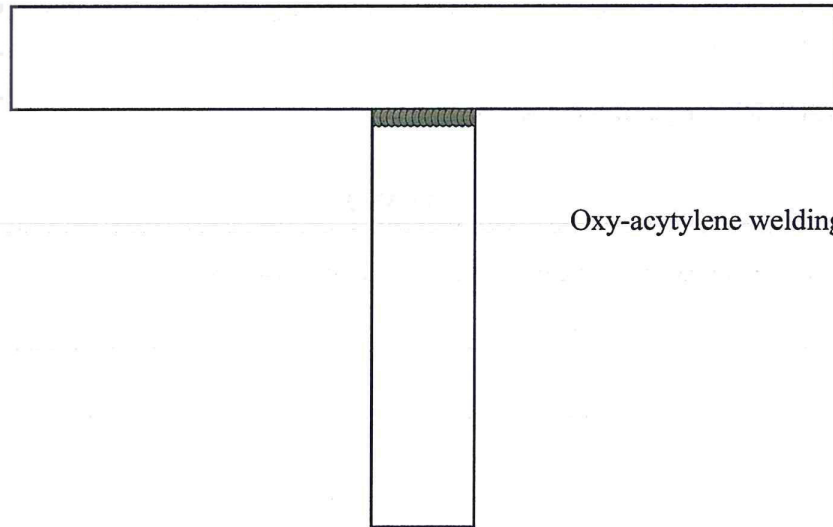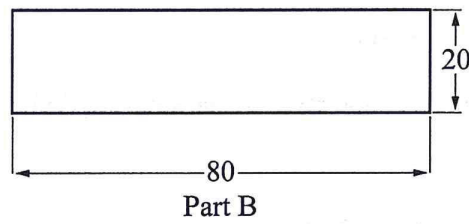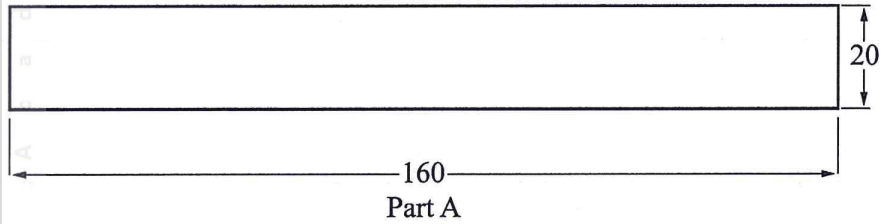
STATION 1

Sketch a cross-sectional drawing of a conventional coil and label **four** parts.   (10 marks)

STATION 2

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

(10 marks)

Part A

Part B

Oxy-acytylene welding

STATION 3

Name the parts labelled **A** to **E**. For each part, identify **one defect** and **one possible cause** and complete the table below. (10 marks)

PART	NAME	DEFECT	CAUSE
A			
B			
C			
D			
E			

STATION 4

Using the tools provided, determine the compression ratio for the single cylinder engine (take clearance volume to be 0.15 cc). (10 marks)

STATION 5

Using the materials and components provided connect a lighting circuit such that three lamps are in parallel and two are in series. (10 marks)

LET THE EXAMINER CHECK YOUR WORK

STATION 6

For the gearbox provided determine the gear ratio for the following gears:

(i)   gear 1 ....

(ii)   reverse ....

(10 marks)

STATION 7

On the vehicle provided:

(i)   Name the part labelled

F ....

G ....

H ....

(3 marks)

(ii)   Demonstrate to the examiner the following:

(a)   How to determine the lock to lock distance of the steering wheel

(b)   How to set the steering wheel to straight ahead position   (7 marks)

STATION 8

Demonstrate to the examiner how to determine the following measurements:

(a)   Taper and ovality of the crankpin marked "**X**" using a micrometer.   (4 marks)

(b)   Big end clearance of the crankpin marked "**Y**" using a plasti-gauge.   (6 marks)

STATION 9

Identify the tools labelled **I** to **R** and state **one use** of each.   (10 marks)

ITEM	NAME	USE

STATION 10

On the multi-cylinder engine provided carry out the following tasks.

(a)   check and comment on the oil level   (4 marks)

(b)   service the air filter   (6 marks)