

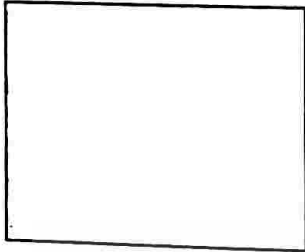
Answer **four** questions **only**.

Where necessary, your answers should be illustrated with freehand sketches.

All questions carry **equal** marks.

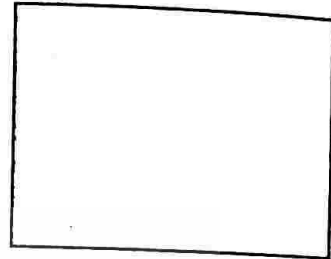
1. (a) Sketch the following representative workshop symbols:

(i) danger;



[3 marks]

(ii) no smoking.



[3 marks]

- (b) State **two** importance of observing cleanliness in motor vehicle workshop.

[4 marks]

- (c) (i) State **one** reason for selecting appropriate tools for a job.

[2 marks]

- (ii) Explain why it is dangerous to work with a mushroom-head cold chisel.

[3 marks]

Index number :

2. (a) The sketch in **Figure 1** shows a type of fuel injector nozzle.

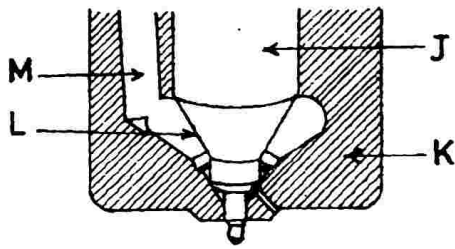


Figure 1

- (i) Identify the type.

[2 marks]

- (ii) Name the parts labelled:

J; _____

K; _____

L; _____

M. _____

[4 marks]

- (b) (i) State **three** purposes of an injector.

[6 marks]

- (ii) Explain *petrol injection system*.

[3 marks]

3. (a) The sketch in Figure 2 shows a pressure cap.

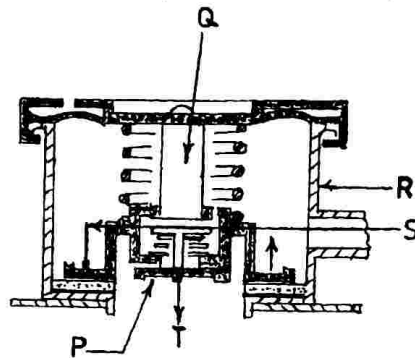


Figure 2

- (i) Name the parts labelled:

P; _____

Q; _____

R; _____

S; _____

T. _____

[5 marks]

- (ii) State the purpose of a radiator pressure cap in water cooling system.

[2 marks]

- (b) Name **two** types of radiator construction.

[2 marks]

- (c) State **one** cause of **each** of the following problems in the engine cooling system:

(i) overheating; _____

(ii) leakage; _____

[2 marks]

Index number :

(iii) noise.
.....

[2 marks]

4. (a) State **three** factors that determines the lifespan of a tyre.

.....
.....
.....
.....
.....

[6 marks]

(b) (i) List **two** types of tyre commonly used in motor vehicles.

.....
.....

[2 marks]

(ii) List **two** types of springs used in the suspension system.

.....
.....

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(c) (i) Explain the term, *toe-in*.

[2 marks]

.....
.....
.....

[3 marks]

(ii) State the function of rubber bushes fitted in each eye of the leaf spring.

.....
.....

[2 marks]

5. (a) The sketch in **Figure 3** shows the coil ignition system of a four cylinder engine.

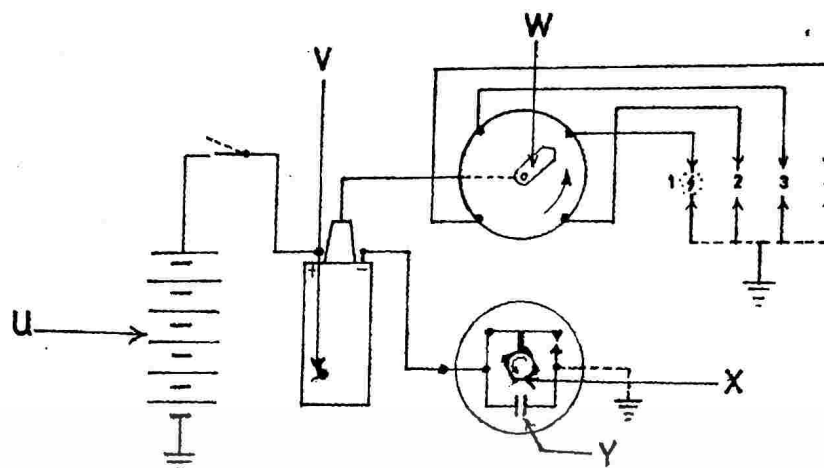


Figure 3

- (i) Name the parts labelled:

U; _____
 V; _____
 W; _____
 X; _____
 Y. _____

[5 marks]

- (ii) State the function of the parts labelled:

V; _____

 X. _____

[4 marks]

Index number :

(iii) What is the firing order of the engine?

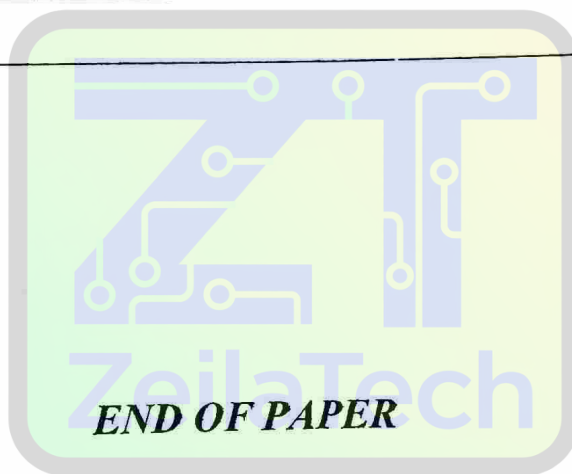
[2 marks]

(b) List **two** safety devices that reduce injury in a motor vehicle in case of an accident.

[2 marks]

(c) State the purpose of a sensor in a modern automobile.

[2 marks]



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