

(b) What are the main components of a steering system ? Describe them with neat sketches.
(15)

10. With suitable sketches, discuss the working principle and functional details of the following :
(10+10)

(i) Power steering.

(ii) Anti lock braking system.

Register Number :

Name of the Candidate :

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P.G. DIPLOMA EXAMINATION, 2008

(AUTOMOBILE MAINTENANCE)

(PAPER - I)

110. BASICS OF AUTOMOBILES

May]

[Time : 3 Hours

Maximum : 100 Marks

*Answer any FIVE questions, choosing THREE
from Part-A and TWO from Part-B.
All questions carry equal marks.*

PART – A

1. (a) Mention the differences between two stroke and four stroke engine. (5)
- (b) With neat sketch, explain the working principle of a 'Zenith carburettor' and indicate the different parts. (10)
- (c) Explain the main functions of piston and connecting rod. (5)

Turn over

2. (a) Draw the sketch of a diesel engine fuel pump and explain its principle of operation. (10)
- (b) With a sketch, explain the battery ignition system of a 4 cylinder engine. (10)
3. (a) Explain the working of a centrifugal clutch. (10)
- (b) Compare the operation of a dry clutch with wet clutch. (5)
- (c) Explain the necessity of an universal joint in an automobile. (5)
4. (a) Explain the working of an epicyclic gear box with a neat sketch. Also, mention its advantages and limitations. (15)
- (b) State the characteristics of an automobile clutch should possess. (5)
5. (a) What is the function of a shock absorber in an automobile? (5)
- (b) Describe the construction and working of a hydraulic shock absorber with neat sketch. Also, state its merits and limitations. (15)

6. (a) What are functions of good suspension system? (5)
- (b) With neat sketch explain any one suspension system. (10)
- (c) Compare air stock absorber with hydraulic shock absorber. (5)

PART – B

7. (a) Discuss the concept of four wheel steering. (5)
- (b) Name the different types of brake system used in automobiles. With a neat sketch, explain the construction and working of a master cylinder in hydraulic brake system. (15)
8. (a) What are the requirements for a good automobile braking system? (5)
- (b) With a neat sketch, describe the working principle of Ackerman steering mechanism. (15)
9. (a) Enumerate the advantages and disadvantages of disc brake over drum brake. (5)

Turn over