

## FACULTY OF ENGINEERING

B.E. IV/IV (M/P) I SEMESTER (New) (Main) Examination, Nov./Dec., 2009  
AUTOMOBILE ENGINEERING (ELECTIVE – I)

Time : 3 Hours ]

[ Max. Marks : 75

**Note :** Answer all questions from Part – A. Answer any **five** questions from Part – B.

## PART – A

(25 Marks)

1. What is the main function of a clutch ?
2. State the advantages of (i) Magnesium alloys (ii) Aluminium alloy wheels.
3. Define the terms (i) Toe in and Toe out (ii) Camber and Caster.
4. What is the principle of automobile brake ?
5. What are helper springs ? What is torsion bar ?
6. What is transfer box ?
7. What is the function of a universal joint ?
8. What is catalytic converter ? What is catalyst ?
9. What is the function of fuel injector ?
10. What are the various types of petrol injector system ?

## PART – B

(50 Marks)

11. What is a function of carburettor ? And describe the simple carburettor with sketch.
12. Explain splash type lubrication system with a neat sketch.
13. Describe about wish bone type suspension system, its advantages and disadvantages.
14. Describe about sliding mesh gear box and constant mesh gear box.
15. Explain about positive crankcase ventilation, its construction and operation.
16. Describe about three-way catalytic converter.
17. Write short notes on :
  - (a) Hybrid fuel vehicles. 4
  - (b) Euro Norms 2 & 3. 4
  - (c) Need for wheel alignment. 2

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