

Code No. : 3145

FACULTY OF ENGINEERING
B.E. 4/4 (M/P) I Semester (Main) Examination, December 2010
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. How the homogeneous mixture of air-fuel is achieved in SI engines ? Explain. 3
2. Explain the functions of piston rings. 2
3. Explain the power transmission system of automobile. 3
4. Differentiate between wet sump and dry sump lubrication systems. 3
5. Describe the working of solenoid switch for starting motor. 3
6. What is wheel balancing ? 2
7. Explain the importance of Universal coupling in automobiles. 2
8. Explain the principle of clutch. 2
9. What is a catalytic converter ? Explain. 2
10. State the Bharat norms of air pollution. 3

PART – B

(50 Marks)

11. a) Explain the schematic layout chassis and its components and discuss the salient features. 6
- b) Differentiate between mechanical and electronic fuel injection systems. 4



12. a) What are different anti freezing compounds required in the coolants ? Explain. 6
b) How to achieve air conditioning in automobile ? Explain. 4
13. a) Draw the schematic diagram of Ackerman steering mechanism and explain. 5
b) What are different types of tyres used ? Explain. 5
14. What are the components required for suspension system ? Explain different types of suspension systems. 10
15. a) Explain the four wheel drive system with simple diagram. 5
b) Describe the constructional features of hydraulic brake system and explain the working principle. 5
16. a) What is power steering ? Explain. 5
b) Explain the torque tube drive system with a neat sketch. 5
17. a) What are different sources of noise pollution in automobiles ? How to control them ? 5
b) Explain the overhandling procedure of four wheel automobile. 5
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