

23/12/16 AN

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Question Paper Code : 60862

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Sixth Semester

Mechanical Engineering

ME 2354/ME 62/10122 ME 604 — AUTOMOBILE ENGINEERING

(Regulations 2008/2010)

(Common to PTME 2354/10122 ME 604 Automobile Engineering for
B.E. (Part-Time) Fifth/Sixth Semester – Mechanical Engineering –
Regulations 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the various cylinder arrangements for the multi-cylinder engines?
2. What are the advantages of Al alloy pistons?
3. List out the emissions that are common to both SI and CI engines.
4. What are the devices available for after-treatment of exhaust gases from SI engines?
5. Why do we provide slip joint in the propeller shaft?
6. What is the function of differential?
7. What do you mean by telescopic steering wheel?
8. Explain the basic difference between independent suspension system and conventional suspension system.
9. What are the advantages of Hybrid vehicle?
10. Mention the advantages of LPG usage in automobiles.

PART B — (5 × 16 = 80 marks)

11. (a) With a neat sketch explain constructional details of IC engine.

Or

(b) Discuss the different types of chassis frame with neat sketches.

12. (a) Explain electronically controlled CRDI system for Diesel injection.

Or

(b) (i) Write short notes on Turbocharger. (6)

(ii) Discuss engine emission control measures for SI engines. (10)

13. (a) Explain the operation of single plate clutch with relevant diagrams.

Or

(b) With the help of a neat sketch, explain the construction and operation of a sliding mesh gear box.

14. (a) Mention different types of braking systems in automobile and explain any one type in detail.

Or

(b) (i) Write short notes on power steering. (6)

(ii) Write briefly about independent type of front suspension system. (10)

15. (a) What are the characteristics of Alcohols? Write detailed notes on the use of Alcohols in Automobile.

Or

(b) Explain in detail about the principle of operation of fuel cell.