

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Sixth Semester

Mechanical Engineering

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

(Regulation 2008/2010)

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

Maximum : 100 marks

Time : Three hours

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Name the resistances to vehicle motion.
2. Name the components of engine.
3. What is gasoline injection system?
4. What are the functions of a turbo charger?
5. Name the types of clutches.
6. Why slip joint is important?
7. Name the types of front axles.
8. What is meant by traction control?
9. What are fuel cells?
10. Write down the advantage and disadvantage of Bio-diesel.

11. (a) (i) Discuss the frame type chassis construction with neat sketch. (8)
(ii) Explain about any two types of stub axles. (8)

Or

- (b) (i) Write about king pin inclination. (8)
(ii) Discuss about toe-in and toe-out. (8)

12. (a) (i) Discuss about CRDI system. (8)
(ii) Explain about the working principle of three way catalytic converter. (8)

Or

- (b) (i) Explain electronic ignition system with neat diagram. (8)
(ii) Discuss the construction and working of rotary distributor type diesel injection system. (8)

13. (a) (i) Discuss about working principle of single plate clutch. (8)
(ii) Explain about gear shifting mechanism with neat diagram. (8)

Or

- (b) (i) Explain the working principle of torque converter with neat diagram. (8)
(ii) Discuss about working principle of differential with diagram. (8)

14. (a) With an aid of neat sketch, explain the working principle of pneumatic suspension system. (16)

Or

- (b) With an aid of a neat sketch, explain the working principle of antilock braking system. (16)

15. (a) (i) Discuss about hybrid vehicles. (8)
(ii) Explain the electrically operated vehicles. (8)

Or

- (b) (i) Explain about working principle of LPG fuelled engines. (8)
(ii) Discuss the working of fuel cells. (8)
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