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Question Paper Code : S 4717

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Eighth Semester

Mechanical Engineering

ME 437 — AUTOMOBILE ENGINEERING

(REGULATION 2001)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List down the classification of I.C. engines based on the number of strokes and method of charging.
2. Mention the advantages of gas turbines over I.C. engines.
3. What are the advantages of Electronic fuel injection of SI engines?
4. State the difference between generator and alternator.
5. List down any two types of clutches.
6. What are the advantages of overdrives?
7. Define camber and caster.
8. List down the types of live rear axles.
9. What are the major constituents of natural gas and LPG?
10. Mention any four types of fuel cells.

PART B — (5 × 16 = 80 marks)

11. (a) Draw the layout of a battery ignition system and mention the function of each component. (16)

Or

- (b) Explain the working of an electronic fuel injection system with a sketch (any one type). (16)

12. (a) Draw the layout of an automobile and indicate its various components. (16)

Or

- (b) Briefly describe the electronic fuel injection with neat sketch. (16)

13. (a) Discuss the construction and operation of a constant mesh gearbox. (16)

Or

- (b) Draw a neat sketch of a differential and explain its operation. (16)

14. (a) What are the different types of wheels? Discuss their relative merits. (16)

Or

- (b) Explain the operation of a telescope type shock absorber with a sketch. (16)

15. (a) Discuss the properties of Hydrogen. (16)

Or

- (b) Explain the working principle of any type of fuel cell with a neat sketch. (16)