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270

Sr. No. 013704

December 2023

B.Tech(ME) B.Tech. VII SEMESTER

Automobile Engineering (013704)

(PEC-ME-723-21) Max. Marks: 75

Time: 3 Hours

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
  2. Answer any four questions from Part -B in detail.
  3. Different sub-parts of a question are to be attempted adjacent to each other.

**PART -A**

- Q1 (a) What are the future trends in Automobile? (1.5)
- (b) What is front wheel drive system of an Automobile Vehicle? (1.5)
- (c) Describe the principle of Electromagnetic plate Clutch. (1.5)
- (d) Write the advantages of Constant mesh Gear Box System (1.5)
- (e) What is the function of Universal joint System? (1.5)
- (f) Write down the need of Suspension system. (1.5)
- (g) What is the requirement of Steering Gear Box? (1.5)
- (h) Discuss the King Pin Inclination system? (1.5)
- (i) What are the side effects of Pollutants through Exhaust gases? (1.5)
- (j) What is the principal of Air brake system? (1.5)

**PART -B**

- Q2 (a) Explain Single plate Clutch system with its diagram (10)
- (b) Distinguish between different types of Frame system (5)
- Q3 (a) What is Hydraulic brake system discuss with neat diagram? (5)
- (b) Discuss function of Leaf Spring system with its diagram used in a Vehicle. (10)
- Q4 Explain Sliding Mesh Gear Box with its Principle, Construction & Working diagram (15)
- Q5 (a) Explain Differential system used in a Vehicle with its diagram. (5)
- (b) Discuss Power Steering System used in a Vehicle with its diagram (10)
- Q6 (a) Explain Lighting system used in a vehicle with charging system by suitable diagrams. (10)
- (b) Explain Exhaust Gas Recirculation System with its diagram. (5)
- Q7 Differentiate between Catalytic Converter and Charcoal system in details? (15)

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