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**Question Paper Code : 57575**

**B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016**

**Sixth Semester**

**Mechanical Engineering**

**ME 6602 – AUTOMOBILE ENGINEERING**

**(Regulations 2013)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A (10 × 2 = 20 Marks)**

1. What are the types of cross sectional frames used in automobile ?
2. What are the forces acting on the running vehicles ?
3. Define "Continuous Injection" of petrol engine.
4. State the diesel vehicle emission norms of Euro BS IV in g/Km.
5. What are the functions of gear box ?
6. What are the functions of differential assembly ?
7. What is the function of the tension spring in the clutch plate ?
8. Name the classifications of brake system.
9. Write short notes on "L.P.G.".
10. Why alcohol is an alternate fuel for S.I. engine ?

**PART – B (5 × 16 = 80 Marks)**

11. (a) (i) Write short notes on the following engine parts :  
(a) Piston (b) Cylinder Head (c) Piston ring (d) Gudgeon pin (e) Flywheel  
(f) Exhaust valve (g) Lubrication pump (8)  
(ii) Draw the layouts of automobile chassis and explain its significance. (8)
- OR**
- (b) (i) Write short notes on the following :  
(a) Valve Mechanism (b) Crankshaft  
(ii) What are the functions at Carburetor ?
12. (a) (i) What are the advantages of Transistorized Coil Ignition (TCI) system ? (4)  
(ii) Sketch and explain the Capacitive Discharge Ignition System. (12)
- OR**
- (b) Describe the working of distributor type fuel pump with a sketch. (16)
13. (a) (i) What are the types of rear axle casing ? (4)  
(ii) What are the types of rear axle drive ? And explain with a neat sketch. (12)
- OR**
- (b) (i) What are the requirements of the clutch ? (8)  
(ii) Sketch and explain the working method of torque tube type propeller shaft. (8)
14. (a) (i) List the types of suspension spring used in automobile.  
(ii) Describe the working method of Antilock Braking System. (ABS)
- OR**
- (b) Draw the schematic diagram of pneumatic braking system and explain it. (16)
15. (a) (i) What are the merits and demerits of LPG as a motor fuel ? (8)  
(ii) List the advantages of LNG. (8)
- OR**
- (b) (i) What are the merits and demerits of Hydrogen fuel ? (8)  
(ii) Explain the merits of Ethanol fuel. (8)