PVP 14

Code: ME8T3B

IV B. Tech - II Semester – Regular / Supplementary Examinations
March 2019

AUTOMOBILE ENGINEERING
(MECHANICAL ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) Define Automobile Engineering.
b) What is the difference between supercharger and turbocharger?
c) What is meant by nitriding of crankshaft? How it is done?
d) List out the types of petrol and diesel injection systems.
e) List out the types of anti-freeze solutions used in cooling systems.
f) What is the principle of centrifugal clutch?
g) Name the type of springs are used for independent and rigid axle suspension systems.
h) What is the difference between Ackerman's steering and Davis steering mechanisms?
i) What are the requirements of brake fluid?
j) What is the principle of Bendix drive?
k) What are the merits and demerits of electrical energy for automobiles?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16 = 48 M

2. a) With neat sketches, explain rear wheel drive, front wheel drive and 4-wheel drive. 8 M

   b) With neat sketch, explain the methods of crankcase ventilation. 8 M

3. a) With neat sketches, explain the working of mechanical and electrical fuel pump. 8 M

   b) With neat sketch, explain the working of electronic ignition system. 8 M

4. a) With neat sketches, explain the working of Cone clutch and single plate clutch. 8 M

   b) With neat sketch, explain the working of torsion bar and mention its advantages and disadvantages. 8 M

5. a) Explain the working of Ackerman's steering mechanism with a neat sketch. 8 M

b) With a neat sketch, explain the working of hydraulic braking system. 8 M

6. a) Explain the working of current-voltage regulator, with a neat sketch. 8 M

b) Explain different pollution control techniques. 8 M