

GANPAT UNIVERSITY

B. Tech. Semester: VIII Mechanical Engineering
Regular CBCS Examination April - June 2016
2ME 805/3 Automobile Engineering

Time: 3 Hours

Total Marks: 70

Instruction: 1 All questions are compulsory
2 Figure to the right indicates full marks

Section – I

Que. – 1 (a) Explain briefly about the defects in chassis frame. [6]

(b) Discuss air suspension system with a neat sketch. [6]

OR

Que. – 1 (a) Draw the layout of an automobile and indicate the various components. [6]

(b) Discuss the merits of independent front suspension system and also discuss the function of shock absorber. [6]

Que. – 2 (a) What are the features of good quality of clutch? Explain the working of multi plates clutch with a neat sketch. [6]

(b) Why testing is required in automobile? Also discuss laboratory and road testing of vehicles in short. [5]

OR

Que. – 2 (a) Describe the principle of the differential with neat sketch. [6]

(b) What do you understand by wet and dry clutch? Give the classification of clutches. [5]

Que. – 3 (a) Discuss general principle of automobile transmission system. And also draw the layout of transmission system. [6]

(b) What are the general requirements of transmission system? What are the various components of transmission system? Describe their role. [6]

Section – II

- Que. – 4 (a) Give the function and location of gear box. Explain the construction of sliding mesh type of a gear box. [6]
- (b) Write short note on “torque converters”. [6]

OR

- Que. – 4 (a) What is necessity of a gear box? Explain the working of constant mesh gear box. What its advantage and dis-advantages? [6]
- (b) Write short note on “universal joint” [6]

- Que. – 5 (a) Give the Ackermann principle of steering. Describe it with neat sketch. [5]
- (b) What are the basic requirements and purpose of brake? and explain air brake [6]

OR

- Que. – 5 (a) What are the various types of steering gear? Why do front wheels have to toe out in turns? Also discuss what is function of camber angle in modern car? [5]
- (b) Explain with the aid of a sketch the working of the master cylinder in detail. [6]

- Que. – 6 (a) With neat sketch explain the working features of 3 way catalytic controller [6]
- (b) What do you understand by tyre wear? What are the causes and remedies of excessive tyre wear? [6]

END OF PAPER