

Exam. Code: 0943
Sub. Code: 7066

1129
B.E. (Mechanical Engineering)
Seventh Semester
MEC-703: Automobile Engineering

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Give only short answer limited to maximum two lines:-
- List various loads on the frame
 - Write procedure to obtain lower gear in a constant mesh gear box.
 - How clutch plate absorbs undesirable torsional vibrations?
 - Which rear live axle is preferred in heavy duty vehicles?
 - Explain tyre designation system. (5x2)

UNIT - I

- II. Draw the road performance curves of automobile with respect to road speed and explain acceleration, gradiability and drawbar pull (10)
- III. a) Explain with sketch working of single plate clutch and list its merits demerits and applications.
- b) Explain with sketch arrangement and working of turbocharger used in automobiles. List the advantages and limitations of using it with 1C engine in automobile. (2x5)
- IV. a) Explain with diagram working of constant mesh gear box used in automobiles and its advantages over sliding mesh gear box.
- b) Discuss the working and characteristics of torque converter. Where it is used and what are its advantages. (2x5)

UNIT - II

- V. Discuss with a neat sketch working of wishbone type front wheel independent suspension system. How it is better than rigid axle suspension system. (10)
- VI. Explain Camber, Steering Axis Inclination and Castor angle made by front wheels and discuss their effect on steering characteristics of vehicle. (10)

P.T.O.

(2)

- VII. a) What is antilock braking system? Discuss with sketch working of antilock braking system used in automobiles along with merits and application.
- b) Discuss with sketch different types of wheels used in automobiles. How wheels are designated? (2x5)

x-x-x

UNIT - II

- V. Discuss with a neat sketch working of Wilson's type front wheel independent suspension system. How it is better than rigid axle suspension system. (10)
- VI. Explain Camber, Steering Axis Inclination and Caster angle made by front wheel and discuss their effect on steering characteristics of vehicle. (10)