

SUBJECT CODE:- 52
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E. (Mech) Examination Nov/Dec 2015
Automobile Engineering
(OLD)

[Time: Three Hours]

[Max. Marks: 100]

“Please check whether you have got the right question paper.”

N.B i) Solve any three questions from each section

ii)Figure to the right indicates full marks

Section-A

- Q1. a) What is a fluid flywheel? How it works? 04
b) What is the need of a gearbox at all? Explain sliding mesh gearbox with neat sketch. 08
c) Discuss in detail the requirement of a good suspension system. 04
- Q.2 a) What types of clutches are used for automatic transmission system? Explain the working of any one of them. 08
b) What is the meaning of tractive efforts? Explain the total resistance and tractive effort curve for different gears. 08
- Q.3 a) What are the types of gear selector mechanism? Explain with neat diagram the operation of interlocking mechanism in detail? 08
b) Explain the antiroll bar suspension with neat diagram. 08
- Q.4 a) Write short note on torque converter. How it differ from fluid flywheel? 06
b) With the help of neat sketch describe the construction of a leaf spring. Discuss different types of eye constructions used for leaf springs. 10
- Q.5 Write short note on(any three) 18
i) Shock absorber
ii) Centrifugal clutch
iii) Performance curves
iv) Air suspension
v) Clutch trouble shootings

SECTION-B

- Q.6 a) Explain with neat diagram the power steering mechanism 08
b) Explain the wheel balancing method in detail 06
c) What are the functions of tyre? 02
- Q.7 a) Explain with neat diagram Hotchkiss drive. 08
b) Enlist different types of steering gearboxes. Also explain recirculating type steering gearbox 08

- Q.8 a) Draw a neat sketch of a typical differential unit in the back axle of a vehicle and explain its working? 08
- b) Give the comparison between battery and magneto ignition system. 08
- Q.9 a) With the help of neat diagram explain Ackermann steering mechanism and derive the relation of correct steering 06
- b) What is the meaning of servo braking system? How the vacuum from the engine inlet manifold is utilized to actuate the vehicle brakes? 10
- Q.10 Write short notes on (any three) 18
- a) Master cylinder
 - b) Under steer and over steer
 - c) Charging system
 - d) Air brakes
 - e) Semi floating rear axle.

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