

B. Tech. 7th Semester (AUE) F. Scheme Examination,

December-2017

AUTOMOBILE ENGG.

Paper-ME-401-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions in all. Question No. 1 is compulsory and select at least one question from each section.

1. (a) What are automobiles and how you can classify them ? 4×5
- (b) Write short note on Freewheel Unit.
- (c) What is spring and name its type with figure.
- (d) Discuss the Sources of Atmospheric Pollution from the automobile.

Section-A

2. Discuss the requirements of Automobile Body. Explain the various types of Vehicle Frame, Separate Body Frame, Unitized Body, Car Body Styles, Bus Body and Commercial Vehicle Body styles. 20
3. What is function of a clutch in an automobile ? Explain the principle of friction clutches with the help of neat diagrams. What are the various factors that affect the torque transmission on a clutch ? Explain. 20

Section-B

4. Explain the Objective of the Gear Box. Explain the Sliding Mesh gear box with the help of simple diagram. 20
5. Discuss clearly the constructional details and operation of various rear axle drives, with the engine placed at the front, Illustrate your answer with simple and neat sketches. 20

Section-C

6. Differentiate clearly between the functions of a spring and a shock absorber. Explain the construction and working of a telescopic type shock absorber with the help of neat diagrams. 20
7. Explain the Rack & Pinion Power Steering Gear and Power steering systems. 20

Section-D

8. What do you mean by brake, give Classification of Brakes? Explain the principle and constructional details of Drum Brake. 20
9. What are the Purpose and Operation of Charging Systems? Explain. 20