

Roll No.

23017

M.E./M. Tech. 2nd Semester

(M & A) (2011-12)

Examination – June, 2013

AUTOMOBILES ENGINEERING

Paper : 970

Time : Three hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any five questions. All questions carry equal marks.

1. What are the main components of an automobile?
Describe all of them briefly also explain the future trends in automobiles. 20

23017-500-(P-3)(Q-8)(13)

P. T. O.

2. Explain briefly the different types of sensors used in steering mechanism for the effective control of automobile. 20
3. Explain the working of automatic clutch with the help of neat diagram also name the vehicles where the automatic clutch is used. 20
4. How do you design the latest automobile considering the latest climatic control and air conditioning techniques. Explain. 20
5. Explain the various sensors and actuators used in the automobiles to increase the safety of the vehicles. 20
6. What are the main components of the automotive electrical system ? Explain with the help of wiring diagram. 20
7. 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

23017-500-(P-3)(Q-8)(13) (2)

8. (a) What are the safety considerations which are taken care in modern vehicle? 10
- (b) Discuss the troubles commonly experienced in the lighting system of an automobile. Suggest also suitable remedies of the same. 10
-