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SUBJECT CODE NO:- H-4032
FACULTY OF SCIENCE AND TECHNOLOGY
Final B.Tech. (Mech.) (Sem-VII)
Elective-III Automobile Engineering
[Revised]

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- 1) Question No. 01 from section A and Question No. 06 from section B is compulsory.
 - 2) Attempt any three questions form each section.
 - 3) Figure to the right indicates full marks.

Section -A

- Q.1 Solve any five questions form the following 10
- 1) State major types of automobiles?
 - 2) List any four components of a power unit of an automobile?
 - 3) Distinguish between water and air cooling?
 - 4) What is mean by mist lubrication system?
 - 5) What is universal joint? Where it is used in automobile vehicle?
 - 6) State the function of rear axle?
- Q.2 A) Draw the layout of an all-wheel driven automobile vehicle and explain the various components of the same? 07
- B) Explain in detail about Synchronesh Gear Box with neat sketch? 08
- Q.3 A) With neat sketch explain any two types of cooling system used in automobile vehicle, and state the requirement of cooling system? 07
- B) What are the features of a good quality clutch? Explain the working of multi plate clutch with a neat sketch? 08
- Q.4 A) What is the need of using a differential assembly? Discuss different types of differentials? 07
- B) What is petrol injection system? What are its advantages and disadvantages? 08
- Q.5 A) Sketch a mechanical fuel pump and describe its working? 07
- B) What is the need of lubrication in an automobile? Explain the working of lubrication system used in automobile engine with neat a sketch? 08

Section B

- Q.6 Solve any five questions from the following 10
- 1) Classify steering system?
 - 2) What is mean by Centre point steering?
 - 3) What is mean by bleeding of brakes?
 - 4) Classify independent rear suspension system.
 - 5) Enlist different types of Brakes?

- 6) What are the different materials used for chassis frames?

- Q.7 A) Explain various steering geometries with the help of neat sketch? 07
B) Explain the construction, working principle and application of Hydraulic braking system with neat a sketch? 08

- Q.8 A) With neat a sketch explain the working principles of pneumatic braking system? 07
B) What do you understand by the directional stability of a vehicle? Briefly describe the factors on which it depends? 08

- Q.9 A) How do you classify Chassis? Explain in detail? 07
B) Explain Ackermann Principle of steering with neat a sketch? 08

- Q.10 A) List and explain various automobile components that are mounted on a chassis? 07
B) Explain briefly the elements of a suspension system and discuss the bouncing, rolling and pitching suspension movement of a cars? 08