

B.Tech. SEM -VII Mechanical 2014 Course (CBCS) : SUMMER - 2019

SUBJECT-AUTOMOBILE ENGINEERING

Day: Monday
Date: 13/05/2019

S-2019-2836

Time: 02.30 PM TO 05.30 PM
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to right indicate **FULL** marks.
- 3) Assume suitable data if necessary.

Q.1 Explain with neat diagram front engine rear wheel drive layout and write its advantages and disadvantages. **(10)**

OR

Q.1 Write detailed classification of automobiles. **(10)**

Q.2 Explain working of torque converter with the help of neat sketch. What are limitations of torque converter? **(10)**

OR

Q.2 Explain in detail with neat sketch Ackerman steering gear mechanism. **(10)**

Q.3 Describe with neat sketch centrifugal clutch. **(10)**

OR

Q.3 Illustrate with neat sketch Air brake system. **(10)**

Q.4 Which are the different types of independent suspensions? Explain any one of them with neat sketch. **(10)**

OR

Q.4 Describe in detail constructional features of the tubed & the tubeless tyres for automotive use. Discuss also their relative merits & demerits. **(10)**

OR

Q.5 Explain with neat sketch principle and working of automobile starting system. **(10)**

OR

Q.5 Explain with sketch battery construction. How battery produces electricity and how charging can be done? Explain. **(10)**

Q.6 Explain closed loop and open loop operating modes in electronic control module (ECM) in automobiles. **(10)**

OR

Q.6 Write short notes on: **(10)**
i) Electronic spark control in gasoline engine.
ii) Optical sensors in automobiles.

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