

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2012301

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.TECH

Regular Theory Examination (Odd Sem - VII), 2016-17

AUTOMOBILE ENGINEERING

Time : 3 Hours

Max. Marks : 100

Section - A

1 Attempt all parts. Each question carries equal marks.
(10×2=20)

- a) Define Gear Ratio?
- b) What is an Automobile?
- c) List application of Gear Mechanism?
- d) Define castor angle?
- e) What is braking chain?
- f) Explain strength and stiffness?
- g) What is the main function Carburetor?
- h) What is function of Fuel Injector?
- i) What is meaning of Euro I and Euro II?
- j) Explain fuel quality standards?

Section - B

2. **Attempt any 5 questions from this section (5×10=50)**
- a) Write general configuration of an automobile.
 - b) Explain automatic transmission with neat sketches in detail.
 - c) Explain different types of mechanical brakes and describe each in brief.
 - d) Explain types of starting motors and describe each in brief.
 - e) What is a catalytic converter? List advantages and application of the same.
 - f) Explain differential gear mechanism of rear axle with a neat sketch.
 - g) Draw and explain the steering geometry in detail.
 - h) Describe Ackerman mechanism? In detail with neat sketches.

Section - C

Attempt any 2 questions from this section(2×15=30)

3. Explain thermal effects related to braking system?

OR

Explain the main parts of an automobile frame with a neat sketch.

4. Explain different types of suspension system? In detail giving application of each.

OR

Explain the provisions made for lighting in automobile engineering with neat sketches.

5. Explain fuel of injector and fuel pump in detail with neat sketches.

OR

Describe emission controls? Elaborate the commission norms in India. Also explain the environment management system?

