

Printed Pages: 3

NME-702

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

Paper ID : 2012301

Roll No.

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**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?

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**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.**

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

**OR**

Explain the provisions mode 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?

