



(Pages : 2)



**B – 2556**

Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, December 2016  
(2008 Scheme)**

**08.803 : AUTOMOBILE ENGINEERING (M)**

Time : 3 Hours

Max. Marks : 100

- Instructions :**
- 1) **Each** question in Part A carries 4 marks.
  - 2) **All** questions in Part A are **compulsory**.
  - 3) **Each** question in Part B carries 20 marks.
  - 4) Answer **any one** question from **each** Module in Part B.
  - 5) Draw **neat** sketches **wherever** possible.

**PART – A**

1. Describe the pressurized cooling system for an IC engine.
2. What are the different types of valve operating mechanism ?
3. What is an overdrive ? Explain.
4. Describe the principle of four wheel drive mechanism.
5. With the help of a line diagram explain an epicyclic gear box.
6. Draw a neat figure of a brake valve of air brake system and name the parts.
7. What are the functions of lubricant in an engine ?
8. Draw cross-section of an automobile tyre and show on it various constructional features.
9. Explain the principle of automatic clutch.
10. Write notes on hybrid vehicles. (10×4=40 Marks)

**PART – B**

**Module – I**

11. a) Give a detailed classification of automobiles.  
b) Explain with neat sketch the working of a radiator.

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**B – 2556**



12. a) Describe the fuel system of a diesel engine.  
b) Briefly explain the ignition system of a modern automobile.

**Module – II**

13. a) Explain with neat sketch the working of a magnetic clutch.  
b) What are the merits and demerits of front wheel drive system ?
14. a) With the help of neat sketch, explain any one of the gear selector mechanisms.  
b) Name the different types of rear axle assemblies in common use and explain any one in detail.

**Module – III**

15. a) With the help of a neat sketch, explain a tandem master cylinder.  
b) Describe various elements of steering geometry.
16. a) Discuss exhaust emission and pollution control.  
b) With the help of neat sketch explain a silencer.

**(20×3=60 Marks)**

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