



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)**

08.803 : AUTOMOBILE ENGINEERING (M)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. List the functions of a cam shaft.
2. Why diesel engines are not common in motor cycles ?
3. What is valve timing diagram ?
4. Draw a block diagram of diesel engine fuel system .
5. Why clutch is needed in an automobile ?
6. What is propeller shaft ?
7. What is an overdrive ?
8. What is oversteering and understeering ?
9. What is a stratified charge engine ?
10. What are the major emission from an automobile ?





PART – B

Answer **any one full** question from **each** Module. **Each** carries **20** marks.

Module – I

11. a) What is the material used for the following parts ? Why ?

- 1) Cylinder Head
- 2) Crank shaft
- 3) Cam shaft
- 4) Piston.

b) List the essential properties of lubricants. Explain the common lubricating system used in automobile.

OR

12. With reference to carburettor, explain the functions of

- 1) Compensating jet
- 2) Choke
- 3) Idle jet
- 4) Accelerating pump and
- 5) Needle valve.

Module – II

13. a) Differentiate friction clutch and fluid coupling.

b) What is the necessity of gear box in an automobile ? With help of a neat sketch, explain the working of a constant mesh gear box.

OR

14. a) Explain the working of a differential in an automobile.

b) Explain with neat sketch three quarter floating and fully floating rear axles.



Module – III

15. a) Explain the functions of each elements of a hydraulic braking system.
- b) What do you understand by power steering ? Explain the working of a power assisted steering system with neat sketch.

OR

16. a) Explain with the help of sketches
- 1) Independent suspension with coil springs.
 - 2) Torsion bar suspension.
- b) Explain with help of sketches, the different types of hybrids.