



Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, January 2018  
(2013 Scheme)**

**13.803 : AUTOMOBILE ENGINEERING (M)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions. **Each** question carries **2** marks.

1. How IC Engines are classified ?
2. Why connecting rod is made of I section at the center ?
3. What is the advantage of oil cooling ?
4. Differentiate between hot plug and cold plug.
5. Why starting motor drive is essential ?
6. Why two wheelers are generally fitted with multi-plate clutch ?
7. What is the function of a differential ?
8. Why jacking up of vehicle is not required for removal of half shaft in fully floating drive axle ?
9. What is the purpose of ABS ?
10. What are the advantages of tubeless tires ? (10×2=20 Marks)

**PART – B**

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

**Module – 1**

11. a) Explain the construction and working of dry liner and wet liner with the help of sketches. 10
- b) Explain the construction and working of a pump circulation cooling system. 10
12. a) What are the various methods of controlling the emission ? Explain briefly. 10
- b) Explain the concept of working of a electric hybrid vehicle with the help of a diagram. 10

**Module – 2**

13. a) Explain the construction and working of a advance mechanisms used in ignition system. **10**  
b) Describe the construction and working alternator with neat sketch. **10**
14. a) Explain the construction of a over running clutch drive with a neat sketch. **10**  
b) Describe the construction and working of fuel level indicator with the help of a sketch. **10**

**Module – 3**

15. a) Describe the construction and working of a torque converter with the help of a diagram. **10**  
b) What is over drive ? Explain the working concept of overdrive. **10**
16. a) Explain the concept of working of a simple planetary gear system with the help of sketch. **10**  
b) What are the different types of drive axle arrangements ? Explain. **10**

**Module – 4**

17. a) Explain the construction and working of a recirculating ball type steering gear box with neat sketch. **10**  
b) Describe the construction and working of hydraulic braking system with neat sketch. **10**
18. a) How air suspension system works ? Explain with the help of a sketch. **10**  
b) Describe the construction and working of power brake with neat sketch. **10**

**(4×20=80 Marks)**

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