

**1140****Code : 9ME-62**

Register Number 

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

**VI Semester Diploma Examination, Nov./Dec. 2014****AUTOMOBILE ENGINEERING****Time : 3 Hours ]****[ Max. Marks : 100**

- Note :** (i) Section – I is compulsory.  
(ii) Answer any **two** full questions from Sections-II, III & IV.

**SECTION – I**

1. (a) Fill in the blanks with appropriate words : 1 × 5 = 5
- (i) The most commonly used lubrication system in automobile is the \_\_\_\_\_ system.
- (ii) The throttle valve in carburettor controls the supply of \_\_\_\_\_.
- (iii) The another name for torsion bar is \_\_\_\_\_.
- (iv) The cam shaft in an engine is always mounted \_\_\_\_\_ to the crank shaft.
- (v) The most accurate timer for electronic ignition system is \_\_\_\_\_.
- (b) Explain with a neat sketch electronic ignition system. 5

**SECTION – II**

2. (a) Explain with a neat sketch the compression ring. 5
- (b) Mention the important basic engine components. 5
- (c) Explain with neat sketch crank shaft. 5
3. (a) Explain with a neat sketch Dry Liners. 5
- (b) What is a engine valve ? And mention the types of engine valves. 5
- (c) Explain with a neat sketch mechanical governor. 5
4. (a) Explain the necessity of cooling system and mention the types of water cooling system. 5
- (b) Explain with a neat sketch high pressure lubrication system. 6
- (c) Mention the advantages and disadvantages of water cooling system. 4

**[Turn over**

9ME-62

2

## SECTION – III

5. (a) Define : 4  
 (i) Cetane number  
 (ii) Octane number
- (b) Explain with a neat sketch A.C. mechanical pump. 6
- (c) Explain with a neat sketch fuel filter. 5
6. (a) Explain briefly with a sketch magneto ignition system. 5  
 (b) Explain with circuit diagram the elements of starting system. 5  
 (c) List the different types of lights used in automobiles. 5
7. (a) Explain the necessity for gear ratio in transmission. 5  
 (b) Explain with sketch the principle of friction clutch. 5  
 (c) With a neat sketch explain constant mesh gear box. 5

## SECTION – IV

8. (a) Explain with a neat sketch the working of a differential. 7  
 (b) Explain the purposes of front axle. 3  
 (c) What is a rear axle ? Mention its types. 5
9. (a) Explain with a neat sketch rear wheel independent suspension. 6  
 (b) Mention the important functions of brake. 4  
 (c) Draw a neat sketch of leaf spring and mention its parts. 5
10. Write short notes on any **three** of the following : 3 × 5 = 15  
 (a) Lead acid battery  
 (b) Power steering  
 (c) Tractor  
 (d) Conventional frame
-