

S.B. Roll No.....

**AUTO ENGINE –I**  
**3<sup>rd</sup> Exam/AUTO/0934/May'17**

**Duration: 3hrs**

**M. Marks =75**

**SECTION-A**

**Q1. Fill in the blanks.**

**1x10=10**

- (a) The diameter of engine cylinder is called.....
- (b) Cycle on which petrol engine works.....
- (c) Scavenging efficiency of ..... stroke engine is more.
- (d) ..... is the power produced inside the engine.
- (e) The firing order of 4 cylinder engine is usually.....
- (f) Piston rings are usually made of .....
- (g) ..... system of lubrication is used almost in modern car engine.
- (h) Ratio of ..... and heat input is called thermal efficiency.
- (i) .....test is used for determining mechanical efficiency of an engine.
- (j) During idling ..... mixture is required.

**SECTION-B**

**Q2. Attempt any five Questions.**

**7x5=35**

- i. Discuss briefly the working principle of 4 stroke petrol engine.
- ii. Explain briefly the function and material of piston, connecting rod and crank shaft.
- iii. What do you mean by mechanical efficiency, thermal efficiency, volumetric efficiency and relative efficiency?
- iv. Discuss the comparison of MPFI system with carburetor method.
- v. Discuss the types of ignition systems .Explain any one.
- vi. Describe the function and working of thermostat and pressure cap used in cooling system.
- vii. Describe briefly pressure lubrication system.
- viii. How is the seizing of piston caused?

**Q3. Attempt any two Questions.**

**15x2=30**

- i. Describe the working principle of 2- stroke petrol engine. Also explain in detail the difference between petrol engine and diesel engine.
- ii. Describe the requirement of air-fuel mixture for different speeds of an engine. Also explain the different operating systems in complete carburetor.
- iii. What is the necessity of cooling system and lubrication system? Explain the characteristics/properties of lubricants required for automobile engine.