

- Q.31 Explain the otto cycle along with diagram.
- Q.32 What are different parameters of testing of IC engines?
- Q.33 What are the pre-starting checks for an IC Engine?
- Q.34 What is the difference between wet and dry type Air cleaner?
- Q.35 List different components of Lubrication system along with their function.

#### SECTION-D

**Note: Long answer questions. Attempt any two questions out of three Questions. (2x10=20)**

- Q.36 What are different methods of cooling an I.C. engine? Also explain the defects in cooling system and their rectification.
- Q.37 What is the importance of testing of IC Engines? Explain any one test for testing an IC Engine in detail.
- Q.38 What are different components of Fuel Injection System? Also explain its working.

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**4th Sem.**  
**Branch : Agri**  
**Sub.: I.C. Engines/Farm I.C. Engines**

**Time : 3 Hrs. M.M. : 100**

#### SECTION-A

**Note: Multiple type Questions. All Questions are compulsory. (10x1=10)**

- Q.1 The distance travelled by piston from Top dead centre to Bottom dead centre.  
a) Bore b) Stroke  
c) Stroke bore ratio d) Swept volume
- Q.2 The thermostat valve operates at about  
a) 100°C b) 75°C  
c) 40°C d) 25°C
- Q.3 The lowest temperature at which the lubricating oil will flash with a small flame.  
a) Fire point b) Flash point  
c) Pour point d) Cloud point
- Q.4 The ratio of total cylinder volume to clearance volume is called  
a) Swept volume b) Crank radius  
c) Compression ratio d) Crank throw

- Q.5 Compression ratio of a Petrol Engine lies in the range of  
 a) 7 to 10                              b) 14 to 20  
 c) 2 to 4                                d) None of the above
- Q.6 The power generated in the engine cylinder and received by piston  
 a) Brake power                        b) Indicated power  
 c) Belt power                          d) PTO power
- Q.7 The pump used to supply the fuel from fuel tank to fuel injection pump is called  
 a) Feed pump                            b) Fuel injection pump  
 c) Gear pump                            d) Rotary pump
- Q.8 Piston compression rings are made of \_\_\_\_\_.  
 a) Cast steel                            b) Cast iron  
 c) Aluminium alloy                  d) Copper
- Q.9 Crankcase ventilation is the process of removing  
 a) Water vapours                      b) Fuel vapours  
 c) Combustion gases                d) All of these
- Q.10 The diesel engines are \_\_\_\_\_ combustion engines.  
 a) Internal                                b) External  
 c) Steam                                  d) Fossil fuel

### SECTION-B

**Note: Objective type questions. All questions are compulsory. (10x1=10)**

- Q.11 Define Piston displacement.

- Q.12 Define additives.
- Q.13 What is the purpose of Lubrication in an engine?
- Q.14 The thermostat valve operates at temperature \_\_\_\_\_.
- Q.15 What is the function of crankshaft?
- Q.16 Write the function of connecting rod.
- Q.17 Write the function of piston ring.
- Q.18 What is the function of fuel injector?
- Q.19 Write down the function of fuel feed pump?
- Q.20 Define Thermal efficiency.

### SECTION-C

**Note: Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)**

- Q.21 Describe three types of nozzles used in fuel injection system.
- Q.22 How would you classify an internal Combustion engine?
- Q.23 Explain the working of Rope brake dynamometer.
- Q.24 Explain the various defects in cooling system.
- Q.25 Compare the petrol engine and diesel engine.
- Q.26 What are different types of alternate fuels used in IC engines?
- Q.27 Describe the working of four stroke cycle engine.
- Q.28 Describe any five properties of engine lubricants.
- Q.29 What is Wankle engine? Explain its working?
- Q.30 What are different types of lubricants?