

- Q.27 Describe different types of nozzles used for fuel injection
- Q.28 Describe pollution control in IC engines.
- Q.29 What checks to be performed before starting an engine.
- Q.30 Describe three types of lubricants.
- Q.31 Explain the working of Rotary / Wankel engine.
- Q.32 What are the parameters to be considered for testing of IC engines?
- Q.33 Describe the different types of Fuel Filters.
- Q.34 Write down the criteria for classification of IC engine?
- Q.35 Describe any one test for testing an I.C. Engine.

#### SECTION-D

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

- Q.36 What are the different types of lubrications systems? Explain the working of lubrication system along with different components and their functions.
- Q.37 Describe the working of Fuel Injection System along with its different components and their functions.
- Q.38 What is the purpose of cooling an engine? Also explain the different types of cooling systems.

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**4th Sem / Agri**  
**Subject:- I.C. Engines / Farm I.C. Engines**

Time : 3Hrs.                                M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The ratio of brake horse power to indicated horse power is
- Mechanical efficiency
  - Thermal efficiency
  - Volumetric efficiency
  - Relative efficiency
- Q.2 In cooling system, the thermostat operates at about
- 160°C
  - 80°C
  - 40°C
  - 25°C
- Q.3 During combustion inside the cylinder, the temperature rises above
- 2000-3000 °C
  - 1500-2000 °C
  - 1000-1200 °C
  - 500-600°C
- Q.4 The compression ratio of a Diesel engine is
- 6:1 to 11:1
  - 12:1 to 22:1
  - 1:1 to 5:1
  - None of the above

- Q.5 The component which delivers finely atomized fuel under high pressure to the engine  
a) Fuel Filter      b) Fuel Injector  
c) Turbocharger    d) High pressure pipe
- Q.6 The specific fuel consumption of a diesel engine as compared to that for petrol engine lies in the range of  
a) Lower            b) Higher  
c) Same for same output d) None of the above
- Q.7 A Diesel engine works on  
a) Diesel cycle      b) Otto cycle  
c) Carnot cycle      d) Dual cycle
- Q.8 Brake Horse Power is determined by  
a) Rope brake  
b) Prony brake  
c) Hydraulic dynamometer  
d) All of above
- Q.9 The ratio of cylinder volume to clearance volume is called  
a) Swept volume      b) Crank radius  
c) Compression ratio    d) Crank throw
- Q.10 A carburettor is used in  
a) Diesel engine  
b) Compression Ignition Engine  
c) Spark Ignition Engine  
d) None of the above

## SECTION-B

**Note:** Objective type questions. All questions are compulsory.  $(10 \times 1 = 10)$

- Q.11 Define Top dead centre.  
Q.12 What is the function of fuel filter?  
Q.13 Define Specific fuel consumption.  
Q.14 The connecting rod converts reciprocating motion to \_\_\_\_\_  
  
Q.15 Give the function of thermostat valve.  
Q.16 Write the function of oil ring.  
Q.17 What is the use of Governer?  
Q.18 What is the objective of Lubrication?  
Q.19 Write the function of oil pressure relief valve.  
Q.20 What is the purpose of cooling an engine?

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions.  $(12 \times 5 = 60)$

- Q.21 What is the difference between Internal and External combustion engines?  
Q.22 What are the different types of piston rings and state their functions?  
Q.23 Explain the diesel cycle along with diagram.  
Q.24 Explain the working of Prony brake dynamometer.  
Q.25 What are the objectives of lubrication?  
Q.26 What are the different types of Air Cleaner?