

**NETTUR TECHNICAL TRAINING FOUNDATION**  
**DIPLOMA IN AUTOMOBILE MANUFACTURING TECHNOLOGY**  
**TML LKO L10**  
**II SEMESTER EXAMINATION – JANUARY 2024**

**SUBJECT: AUTOMOBILE ENGINEERING-I**  
**SUBJECT CODE: S2 T5**

**TOTAL MARKS: 70 Marks**  
**TOTAL TIME: 2Hr 30 Min**

**PART A**

**(25 Marks - 30 Mins.)**

**1.0 CHOOSE THE CORRECT ANSWER**

**(15 X 01 =15 Marks)**

- 1.1 Indicated power of a 4-stroke engine is equal to \_\_\_\_\_  
a)  $4pLAN$                       b)  $pLAN/2$                       c)  $pLAN$                       d)  $2pLAN$                       ( )
- 1.2 What is the combustion in compression ignition engine?  
a) Heterogeneous      b) Laminar                      c) Homogeneous              d) None of the              ( )  
mentioned
- 1.3 Which of the following is the anti-knock for compression ignition engines?  
a) Amyl nitrate              b) Naphthene                      c) Hexadecane                      d) Tetra ethyl lead              ( )
- 1.4 The engine part in which carburetion takes place is \_\_\_\_\_  
a) Radiator                      b) Carburetor                      c) Cylinder                      d) Sediment                      ( )  
bowling
- 1.5 Engine cylinder block is usually made up of  
a) Aluminum                      b) Grey cast iron                      c) Both a and b                      d) Silicon carbide              ( )  
alloy
- 1.6 Ignition quality of petrol is expressed by  
a) Octane number      b) Calorific value                      c) Self ignition                      d) Cetane number              ( )  
temperature
- 1.7 Which of the following is the lightest and most volatile liquid fuel?  
a) Diesel                      b) Petrol                      c) Gasoline                      d) Fuel oil                      ( )
- 1.8 Generally which brakes are on the front wheels  
a) Drum brake                      b) Disk brake                      c) Shoe brake                      d) Double shoe                      ( )  
brake
- 1.9 Theoretically, the inlet valve should close at what position of the piston  
a) Bottom dead                      b) Side centre position                      c) Bottom side                      d) Top dead                      ( )  
centr    position    centre
- 1.10 The gasoline engine requires much \_\_\_\_\_ air than a diesel engine  
a) Less                      b) More                      c) Equal                      d) None of the                      ( )  
mentioned
- 1.11 In most automobiles, which lubrication system is commonly used  
a) Splash system                      b) Pressure system                      c) Petrol system                      d) Gravity system              ( )
- 1.12 Which of the following oils has the highest viscosity?  
a) SAE 20                      b) SAE 10                      c) SAE 50                      d) SAE 45                      ( )
- 1.13 Engine piston is usually made up of

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- a) Aluminum alloy      b) Grey cast iron      c) Both a and b      d) Silicon carbide ( )
- 1.14 What is Cetane?  
a) It has zero cetane number      b) It has 100 cetane number      c) It helps detonation      d) It is a straight chain paraffin ( )
- 1.15 Which of the following is the lightest and most volatile liquid fuel?  
a) Diesel      b) Petrol      c) Gasoline      d) Fuel oil ( )

**2.0 FILL IN THE BLANKS**

**(05 X 01 = 05 Marks)**

- 2.1 In four stroke cycle, crank shaft revolves \_\_\_\_\_ revolution.
- 2.2 Cam shaft contains \_\_\_\_\_
- 2.3 Examples of air cooling system are \_\_\_\_\_
- 2.4 \_\_\_\_\_ invented two-stroke engine in 1878.
- 2.5 Firing order of six stroke is \_\_\_\_\_

**3.0 MATCH THE FOLLOWING**

**(05 X 01 = 05 Marks)**

- 3.1 Carburetor      A) To filter dust from fuel
- 3.2 Spark Plug      B) To collect dust and dirt of fuel
- 3.3 Fuel Injector      C) Mixture of Air and Fuel
- 3.4 Fuel Filter      D) To inject fuel in Engine Cylinder
- 3.5 Sediment Bowl      E) To ignite the mixture of air and fuel

3.1	3.2	3.3	3.4	3.5

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**PART B**

**(45 Marks-02 Hrs.)**

**1.0 ANSWER ANY TEN OF THE FOLLOWING**

**(10 X 02 = 20 Marks)**

- 1.1 Give four difference between two stroke and four stroke
- 1.2 Explain cam shaft
- 1.3 Draw actual valve timing diagram for a four stroke cycle Diesel engine.
- 1.4 What is spark plug?
- 1.5 What is governor?
- 1.6 What is chassis frame?
- 1.7 What is Rim?
- 1.8 Name different parts of an IC Engine.
- 1.9 Explain connecting rod.
- 1.10 What is fuel pump?
- 1.11 What is supercharger?
- 1.12 Explain Gross Vehicle Weight Rating (GVWR)

**2.0 ANSWER ANY FIVE OF THE FOLLOWING**

**(05 X 03 = 15 Marks)**

- 2.1 Explain piston & piston rings.
- 2.2 How fuel system works in petrol engine?
- 2.3 Explain function of ignition system.
- 2.4 Explain function of braking system.
- 2.5 What is the purpose of clutch?
- 2.6 Explain air cooling system & water cooling system.

**3.0 ANSWER THE FOLLOWING**

**(05 X 02 = 10 Marks)**

- 3.1 Explain working of four stroke Diesel engine (Compression Ignition Engine)
- 3.2 Explain frame & it's types.