

Railway Recruitment Cell

Post Name : Mechanic Diesel

Exam Code : MASSXAED

Exam Date : 21-06-2024

Exam Time : 11:15AM

Question No. 1

The carburetor is used to-

- A) Supply petrol alone to the cylinder
B) Atomize petrol, mix it with air and supply it to the cylinder
C) Supply a mixture of petrol and water to the cylinder
D) Supply air alone to the cylinder

Answer Key: B

Question No. 2

In a Diesel cycle, combustion takes place at-

- A) Constant pressure
B) Constant temperature
C) Constant volume
D) All of the options

Answer Key: A

Question No. 3

Inlet valves are arranged in the cylinder head and the exhaust valves are arranged in the cylinder block in-

- A) 'F' head
B) 'I' head
C) 'T' head
D) 'L' head

Answer Key: A

Question No. 4

One bar is equivalent to-

- A) 1 kPa
B) 10 kPa
C) 100 kPa
D) 1000 kPa

Answer Key: C

Question No. 5

Opening and closing of valves in relation to the piston and crankshaft position is called-

- A) Valve lapping
B) Valve replacing
C) Valve timing
D) Valve honing

Answer Key: C

Question No. 6

A wet type air cleaner is also known as a/an _____.

- A) Oil bath type air cleaner
B) Dry type air cleaner
C) Paper type air cleaner
D) Cloth type air cleaner

Answer Key: A

Question No. 7

The main function of the lubricant is to-

- A) Improve the aesthetic look of parts
- B) Increase the hardness of the parts with which it is in contact
- C) Minimize the friction between two moving parts
- D) None of the options

Answer Key: C

Question No. 8

The tendency of a fuel to change from liquid form to vapour form is known as-

- A) Volatility
- B) Sublimation
- C) Viscosity
- D) Fluidity

Answer Key: A

Question No. 9

Telescopic gauges are used to measure-

- A) Thickness of slip gauges
- B) Height of buildings
- C) Internal diameters
- D) Angles

Answer Key: C

Question No. 10

The full form of BHP is-

- A) Bearing Horse Power
- B) British Horse Power
- C) Brake Horse Power
- D) Brake House Power

Answer Key: C

Question No. 11

During discharge of a battery, the active material in both the plates is changed to _____.

- A) Spongy lead
- B) Lead oxide
- C) Lead sulphate
- D) Lead nitrate

Answer Key: C

Question No. 12

A cylinder block is made of _____.

- A) Copper
- B) Grey cast iron
- C) Bronze
- D) Steel

Answer Key: B

Question No. 13

The sensor which measures the outside air entering the engine is _____.

- A) Throttle position sensor (TPS)
- B) Oxygen sensor

C) Mass air flow sensor (MAF)

D) Manifold Absolute pressure sensor (MAP)

Answer Key: C

Question No. 14

The distance between the centre of front & rear wheels from side view is-

A) Wheel track

B) Front overhang

C) Rear overhang

D) Wheelbase

Answer Key: D

Question No. 15

The ratio of total volume of cylinder to its clearance volume is known as-

A) Compression ratio

B) Compression pressure

C) Clearance volume

D) Swept volume

Answer Key: A

Question No. 16

Which tool should be used for fitting a ring in a piston?

A) Ring screwdriver

B) Ring expander tool

C) Pipe wrench

D) Plier

Answer Key: B

Question No. 17

In the carburettor, the correct level of petrol is maintained by-

A) Choke circuit

B) Throttle circuit

C) Float circuit

D) High speed circuit

Answer Key: C

Question No. 18

In diesel engine, the fuel is ignited by-

A) A Fuel pump

B) A spark plug

C) An injector

D) Virtue of temperature of compressed air

Answer Key: D

Question No. 19

Venturi unit and diaphragm unit are the two parts of which of the following governors?

A) Mechanical

B) Hydraulic

C) Pneumatic

D) Servo

Answer Key: C

Question No. 20

The colour of positive plate of a lead-acid battery is-

- A) Brown
- C) White

- B) Grey
- D) Black

Answer Key: A

Question No. 21

What type of energy transformation takes place during discharging of battery?

- A) Chemical energy to electrical energy
- B) Electrical energy to chemical energy
- C) Mechanical energy to electrical energy
- D) Electrical energy to mechanical energy

Answer Key: A

Question No. 22

The process used to reduce the thickness of a metal to the required size is called-

- A) Shearing
- B) Bending
- C) Drawing
- D) Squeezing

Answer Key: D

Question No. 23

An externally threaded headless fastener where one end usually mates with a tapped component and the other with a standard nut is called a-

- A) Screw
- B) Bolt
- C) Stud
- D) Dowel pin

Answer Key: C

Question No. 24

Unthreaded ring-shaped metal fasteners installed into a groove on a shaft or bore to retain an assembly without the aid of threaded fasteners are called-

- A) Lock nuts
- B) Circlips
- C) Cotter wedges
- D) Lock washers

Answer Key: B

Question No. 25

An electromagnetic actuating device that pushes or pulls a shaft or any metallic arrangement is known as a-

- A) Solenoid
- B) Lever
- C) Fuse
- D) Transformer

Answer Key: A

Question No. 26

Glow plugs are used in the-

- A) Petrol engine
- B) Otto cycle engine
- C) Direct injection LPG engine
- D) Indirect injection diesel engine

Answer Key: D

Question No. 27

The instrument that keeps track of the distance travelled by the vehicle is a-

- A) Speedometer
- B) Tachometer
- C) Odometer
- D) Barometer

Answer Key: C

Question No. 28

A high octane number indicates-

- A) The ability of a fuel to resist knocking
- B) That the petrol is unsuitable for use in an SI engine
- C) That the fuel-air mixture will not ignite when a spark is initiated
- D) That the petrol is easily prone to knocking

Answer Key: A

Question No. 29

Which of the following is NOT a power tool?

- A) Circular saw
- B) Bandsaw
- C) Mallet
- D) Angle grinder

Answer Key: C

Question No. 30

Compared to a 10W-40 SAE grade oil, at normal engine operating temperatures, a 10W-30 grade oil will-

- A) Flow lesser
- B) Have the same flow characteristic
- C) Flow easier
- D) Be unpredictable

Answer Key: C

Question No. 31

Sound waves travel through insulative materials and get partially transformed to heat energy, in a/an-

- A) Absorptive muffler
- B) Reactive muffler
- C) Steam vent muffler
- D) Both reactive and steam vent mufflers

Answer Key: A

Question No. 32

In the FPS system of units, the letters 'FPS' stand for-

- A) Foot, Pound and Second
- B) Foreign Present System
- C) Feet Para System
- D) Foot Parametric Sine

Answer Key: A

Question No. 33

Centimetres must be divided by _____ to convert them to 'feet'.

- A) 14.23
- B) 30.48

C) 2.56

D) 95.3

Answer Key: B

Question No. 34

The property of a metal by which it can be drawn into thin wires is termed as-

A) Resilience

B) Ductility

C) Malleability

D) Toughness

Answer Key: B

Question No. 35

The ability of a deformed body to return to its original shape and size when the deforming force is removed is termed as-

A) Elasticity

B) Tensile strength

C) Toughness

D) Malleability

Answer Key: A

Question No. 36

Cast iron generally has a carbon percentage of-

A) 0.2

B) 0.5

C) 0.8

D) More than 2

Answer Key: D

Question No. 37

Steel can be described as-

A) Pure iron

B) Mostly iron with a small amount of carbon in it

C) Mostly carbon with a small amount of iron in it

D) Pure carbon

Answer Key: B

Question No. 38

The change in the velocity of an object per unit time is called-

A) Speed

B) Acceleration

C) Scalar quantity

D) All of the options

Answer Key: B

Question No. 39

The object which does the work _____ and the object on which the work is done _____.

A) Loses energy, gains energy

B) Gains energy, Loses energy

C) Gains energy, gains energy

D) Loses energy, loses energy

Answer Key: A

Question No. 40

The mechanical efficiency of an engine is given by-

- A) Indicated HP - Brake HP
- B) $(\text{Brake HP} / \text{Indicated HP}) \times 100$
- C) $2 \times (\text{Indicated HP} - \text{Brake HP})$
- D) $(\text{Indicated HP} / \text{Brake HP}) \times 100$

Answer Key: B

Question No. 41

Absolute pressure is given by-

- A) Gauge pressure x Atmospheric pressure
- B) Gauge pressure / Atmospheric pressure
- C) Gauge pressure + Atmospheric pressure
- D) All of the options

Answer Key: C

Question No. 42

Identify the "A0" drawing sheet size from the following.

(All lengths are in mm.)

- A) 420 x 594
- B) 210 x 297
- C) 148 x 210
- D) 841 x 1189

Answer Key: D

Question No. 43

Generally, if the 'Top View' of an object is above its 'Front View' in a drawing sheet, the drawing is said to follow the _____ angle projection.

- A) First
- B) Third
- C) Sixth
- D) Ninth

Answer Key: B

Question No. 44

In a drawing sheet, the title block should generally be in the _____ corner.

- A) Top-right
- B) Top-left
- C) Bottom-right
- D) Bottom-left

Answer Key: C

Question No. 45

A (bent) thin solid line with an arrow at one end pointing at a feature with which the note on the other end of the line is associated, is called a/an-

- A) Leader line
- B) Hatching line
- C) Centre line
- D) Axis line

Answer Key: A

Question No. 46

In the _____, dimensions are placed perpendicular to the dimension line in such a way that it may be read from the bottom edge or right-hand edge of the drawing sheet.

- A) Aligned system
- B) Unidirectional system
- C) Both aligned and unidirectional systems
- D) Neither the aligned nor unidirectional system

Answer Key: A

Question No. 47

When all the four sides are equal and the four angles are right angles in a shape, it is generally called a-

- A) Square
- B) Rectangle
- C) Parallelogram
- D) None of the options

Answer Key: A

Question No. 48

A common method of representing a 'three-dimensional object' by three 'two-dimensional drawings' is called-

- A) Isometric projection
- B) Orthographic projection
- C) Both isometric and orthographic projections
- D) None of the options

Answer Key: B

Question No. 49

Which of the following has the object's vertical lines drawn vertically and the object's horizontal lines, in its width and depth, shown at 30 degrees to the horizontal?

- A) Orthographic projection
- B) Isometric projection
- C) Both isometric and orthographic projections
- D) None of the options

Answer Key: B

Question No. 50

The simple machine with a bar or board that rests on a support called a fulcrum, is called the-

- A) Wheel and axle
- B) Lever
- C) Pulley
- D) Inclined plane

Answer Key: B

Question No. 51

In the CGS system of units, the letters 'CGS' stands for-

- A) Cellular Goods System
- B) Centimetre, Gram and Second
- C) Centimetre Goods System
- D) Central Goods and Supplies

Answer Key: B

Question No. 52

How many centimetres are there in an inch?

- A) 10.5
- B) 20.25
- C) 5.26
- D) 2.54

Answer Key: D

Question No. 53

One (international avoirdupois) pound is approximately equal to _____ kilograms.

- A) 0.21
- B) 0.11
- C) 0.45
- D) 0.65

Answer Key: C

Question No. 54

Which of the following is a ferrous metal?

- A) Gold
- B) Silver
- C) Wrought iron
- D) Aluminium

Answer Key: C

Question No. 55

Which of the following is a non-ferrous metal?

- A) Cast iron
- B) Zinc
- C) Wrought iron
- D) Carbon steel

Answer Key: B

Question No. 56

The property of metals by which they can be beaten into thin sheets is called-

- A) Tensile strength
- B) Ductility
- C) Malleability
- D) Elasticity

Answer Key: C

Question No. 57

The property of metals by which they cannot be scratched or cut is called-

- A) Malleability
- B) Ductility
- C) Hardness
- D) Elasticity

Answer Key: C

Question No. 58

White cast iron is generally-

- A) Hard and brittle
- B) Soft
- C) Malleable
- D) Ductile

Answer Key: A

Question No. 59

Which type of cast iron has graphite flakes?

- A) White cast iron
- B) Grey cast iron
- C) Both white and grey cast iron
- D) Neither white nor grey cast iron

Answer Key: B

Question No. 60

Ductile cast iron is also called-

- A) Grey cast iron
- B) White cast iron
- C) Both grey and white cast iron
- D) Nodular or spheroidal graphite cast iron

Answer Key: D

Question No. 61

Which of the following is contained in alloy steel?

- A) Iron
- B) Carbon
- C) Alloying elements such as nickel, chromium, etc.
- D) All of the options

Answer Key: D

Question No. 62

_____ is the power available at the crankshaft.

- A) IHP
- B) BHP
- C) Both IHP and BHP
- D) None of the options

Answer Key: B

Question No. 63

The pressure that is measured relative (that is, with respect) to the atmospheric pressure is termed as-

- A) Absolute pressure
- B) Zero-reference pressure
- C) Gauge pressure
- D) No-reference pressure

Answer Key: C

Question No. 64

The T-square, an instrument used in engineering drawing, is-

- A) Used to check perpendicularity of workpieces
- B) Similar to a compass
- C) Used to draw horizontal lines on the drawing sheet
- D) Similar to a divider

Answer Key: C

Question No. 65

The clutch cover is bolted to the-

- A) Friction disc
- B) Flywheel
- C) Car frame
- D) Engine block

Answer Key: B

Question No. 66

Which of the following is NOT a component of the engine cooling system?

- A) Radiator
- B) Water pump

C) Hoses

D) Air compressor

Answer Key: D

Question No. 67

In a petrol engine, the air-fuel mixture is drawn into the cylinder due to vacuum created during the-

A) Power stroke

B) Exhaust stroke

C) Suction stroke

D) Compression stroke

Answer Key: C

Question No. 68

Generally, in which of the following is the air-cooling system of engine adopted?

A) Trucks

B) Vans

C) Two-wheelers

D) Cars

Answer Key: C

Question No. 69

The compression ratio of a petrol engine is closer to-

A) 8 : 1

B) 78 : 1

C) 24 : 1

D) 30 : 1

Answer Key: A

Question No. 70

What does 'SAE' in the code for specifying the viscosity grade of lubricating oil stand for?

A) Society of Atomic Energy

B) Society of Automobile Energy

C) Society of American Engineers

D) Society of Automotive Engineers

Answer Key: D

Question No. 71

Pre-combustion chambers are used in which of the following?

A) Direct Injection (DI) engines

B) Indirect Injection (IDI) engines

C) Multi-point Fuel Injection (MPFI) engines

D) Common Rail Direct Injection (CRDI) engines

Answer Key: B

Question No. 72

In a turbocharger, the turbine wheel housing is connected to the-

A) Intake manifold

B) Front of the engine block

C) Flywheel side

D) Exhaust manifold

Answer Key: D

Question No. 73

The clutch is part of the-

- A) Suspension system
- C) Transmission system

- B) Lubrication system
- D) Exhaust system

Answer Key: C

Question No. 74

An instrument that measures pressures below the atmospheric pressure is called the-

- A) Pitch gauge
- C) Feeler gauge
- B) Slip gauge
- D) Vacuum gauge

Answer Key: D

Question No. 75

Which of the following is a switching device that allows one signal to control the switching of another circuit without any electrical contact between the two circuits?

- A) Electromagnet
- C) Fuse
- B) Relay
- D) Capacitor

Answer Key: B