

Railway Recruitment Cell

Post Name : Tractor Mechanic

Exam Code : MASSXARA

Exam Date : 21-06-2024

Exam Time : 11:15AM

Question No. 1

The Tappet clearance is measured by the-

- A) Feeler gauge
- B) Vernier caliper
- C) Micrometer
- D) Screw gauge

Answer Key: A

Question No. 2

In which of the following systems are inlet valves arranged in the cylinder head and exhaust valves arranged in the cylinder block?

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

Answer Key: A

Question No. 3

Detonation leads to-

- A) Late starting
- B) Oil leaking
- C) Knocking sound
- D) Stopping of engine

Answer Key: C

Question No. 4

Which of the following controls the fluctuation of engine speed during a cycle?

- A) Flywheel
- B) Crankshaft
- C) Camshaft
- D) Power output

Answer Key: A

Question No. 5

If the engine coolant leaks into engine oil, then the engine oil appears-

- A) Milky
- B) Greenish
- C) Blackish
- D) None of the options

Answer Key: A

Question No. 6

Which of the following components in an engine mixes fuel and air and vaporizes the fuel?

- A) Catalytic converter
- B) Carburettor
- C) Oil scrapper
- D) Ignition coil

Answer Key: B

Question No. 7

The ratio of specific heat at constant pressure (C_p) and specific heat at constant volume (C_v) is-

- A) Equal to zero
- B) Equal to 1
- C) Less than 1
- D) Greater than 1

Answer Key: D

Question No. 8

The starting point of a piston's downward movement in the cylinder is known as-

- A) BDC
- B) TDC
- C) IHP
- D) BHP

Answer Key: B

Question No. 9

One horsepower is approximately equal to-

- A) 100 W
- B) 573.2 W
- C) 684.2 W
- D) 746 W

Answer Key: D

Question No. 10

In which of the following engines are all the cylinders arranged in a horizontal line?

- A) V engine
- B) Opposed engine
- C) Radial engine
- D) Inline engine

Answer Key: D

Question No. 11

What is the main function of the control valve used in the hydraulic system of a tractor?

- A) To change the direction of lifting only
- B) To store hydraulic oil only
- C) To change the speed of lifting only
- D) To change both the direction and speed of lifting

Answer Key: D

Question No. 12

Which scraper has the cutting edge shaped into a flat circular disc?

- A) Half-round scraper
- B) Three-square scraper
- C) Bull-nose scraper
- D) Flat scraper

Answer Key: C

Question No. 13

Hand-forging is done with the help of a-

- A) Chisel
- B) Punch

C) Saw

D) Hammer

Answer Key: D

Question No. 14

The cord of a tyre is made of-

A) Rubber

B) Nylon

C) Ceramic

D) Plastic

Answer Key: B

Question No. 15

Which of the following combinations of gates is the NOR gate?

A) OR and NOT gates

B) AND and OR gates

C) OR and NAND gates

D) AND and NOT gates

Answer Key: A

Question No. 16

What is the formula to calculate the total resistance of R_1 and R_2 in a series circuit?

A) $1/R = 1/R_1 + 1/R_2$

B) $1/R = 1/R_1 - 1/R_2$

C) $R = R_1 + R_2$

D) $R = R_1 - R_2$

Answer Key: C

Question No. 17

The exhaust valve is completely closed during the-

A) Suction stroke only

B) Compression stroke only

C) Exhaust stroke only

D) Both suction and compression strokes

Answer Key: D

Question No. 18

The exhaust valve is closed at the beginning and opens just before the end of the _____ stroke.

A) Suction

B) Compression

C) Combustion

D) Exhaust

Answer Key: C

Question No. 19

If the clearance volume is 90cm^3 and displacement volume is 540cm^3 , then the compression ratio will be-

A) 3 : 1

B) 4 : 1

C) 7 : 1

D) 9 : 1

Answer Key: C

Question No. 20

Which equipment is used for only levelling the soil ground?

- A) Tipper
- C) Minivan

- B) Dozer
- D) Jeep

Answer Key: B

Question No. 21

What is the purpose of the power tiller?

- A) Rock drilling
- C) Pull heavy loads
- B) Prepare soil for farming activities
- D) Passenger transportation

Answer Key: B

Question No. 22

Car tyres normally inflated with compressed air approximately contain-

- A) 50% oxygen and 50% nitrogen
- C) 40% carbon dioxide and 60% nitrogen
- B) 20% oxygen and 80% nitrogen
- D) 60% carbon dioxide and 40% nitrogen

Answer Key: B

Question No. 23

Which of the following is a tin based alloys?

- A) Brass
- C) Babbitt metal
- B) German silver
- D) Nickel

Answer Key: C

Question No. 24

What is the formula for power, if the values of voltage and resistance are known?

- A) $P = V \times R$
- C) $P = V^2/R$
- B) $P = V^2 \times R$
- D) $P = V^2 \times R^2$

Answer Key: C

Question No. 25

Which of the following is a corrosive flux?

- A) Zinc chloride only
- C) Rosin only
- B) Ammonium chloride only
- D) Both zinc and ammonium chloride

Answer Key: D

Question No. 26

Which type of cooling system uses a water pump?

- A) Air-cooled system
- C) Thermo-siphon system
- B) Forced circulation system
- D) None of the options

Answer Key: B

Question No. 27

Which type of process is followed to remove air from the diesel fuel system?

- A) Cleaning
- B) Bleeding
- C) Calibration
- D) Phasing

Answer Key: B

Question No. 28

Which type of lubrication system oil is delivered from a separate tank to the components?

- A) Petrol oil
- B) Splash
- C) Dry sump
- D) Combined

Answer Key: C

Question No. 29

Which part of the air-cooled engine dissipates heat from the engine to atmospheric air?

- A) Piston
- B) Sparkplug
- C) Cylinder
- D) Metal fins

Answer Key: D

Question No. 30

Where is the turbocharger mounted in an engine?

- A) On the intake manifold
- B) On the tappet cover
- C) On the exhaust manifold
- D) On the flywheel housing

Answer Key: C

Question No. 31

What is the function of a governor in automobiles?

- A) To maintain the speed of engine within specified limits
- B) To increase the intake of air during the suction stroke
- C) To improve the suspension effect
- D) To circulate the lubrication oil through all the parts

Answer Key: A

Question No. 32

Electrical signals are converted into mechanical forces using-

- A) Diodes
- B) Transistors
- C) Capacitors
- D) Solenoids

Answer Key: D

Question No. 33

Which cranking system is provided for tractor engines these days?

- A) Rope cranking
- B) Handle cranking
- C) Compressed air cranking
- D) Electric motor cranking

Answer Key: D

Question No. 34

Which type of gearbox consists of annular and planet gears?

- A) Constant-mesh gearbox
- B) Sliding-mesh gearbox
- C) Epicyclic gearbox
- D) Synchro-mesh gearbox

Answer Key: C

Question No. 35

_____ is also known as straight-cut gear.

- A) Helical gear
- B) Worm gear
- C) Spur gear
- D) Herring-bone gear

Answer Key: C

Question No. 36

Expand 'B' in the ABC of first aid.

- A) Breaking
- B) Breathing
- C) Bending
- D) Bulking

Answer Key: B

Question No. 37

Class D fire is related to-

- A) Wood
- B) Paper
- C) Cloth
- D) Metal

Answer Key: D

Question No. 38

_____ is the method of extinguishing a fire by removing fuel in the vicinity of fire.

- A) Starving
- B) Smothering
- C) Cooling
- D) Scavenging

Answer Key: A

Question No. 39

Which of the following is equal to 1 metre?

- A) 1000 mm
- B) 10 mm
- C) 0.1 mm
- D) 0.001 mm

Answer Key: A

Question No. 40

Hammer is required for which of the following operations?

- A) Forging
- B) Punching
- C) Riveting
- D) All of the options

Answer Key: D

Question No. 41

A puller is used to remove-

- A) Bearings
- B) Pulleys
- C) Gears
- D) All of the options

Answer Key: D

Question No. 42

Which key is in a rectangular section without the taper?

- A) Tangent key
- B) Feather key
- C) Parallel sunk key
- D) Woodruff key

Answer Key: C

Question No. 43

The basic size of 12H7 is-

- A) 32
- B) 12
- C) 7
- D) 18

Answer Key: B

Question No. 44

Which is used to measure the pitch of both external and internal threads?

- A) Snap gauge
- B) Plug gauge
- C) Feeler gauge
- D) Screw pitch gauge

Answer Key: D

Question No. 45

Which portion of the tyre comes in direct contact with the road?

- A) Tread
- B) Belt
- C) Carcass
- D) Bead filler

Answer Key: A

Question No. 46

Which material does NOT resist the flow of electrons?

- A) Gold
- B) Copper
- C) Silver
- D) All of the options

Answer Key: D

Question No. 47

How many ports are there in a 4/2 valve?

- A) 4
- B) 2

C) 6

D) 12

Answer Key: A

Question No. 48

Which stroke is also known as the power stroke?

A) Exhaust stroke

B) Suction stroke

C) Compression stroke

D) Expansion stroke

Answer Key: D

Question No. 49

Glow plugs are traditionally used for supplementing engine-start on-

A) Petrol engines

B) Diesel engines

C) LPG engines

D) All of the options

Answer Key: B

Question No. 50

What is the purpose of the flywheel?

A) To store the energy produced by the engine

B) To start the engine

C) To supply air to the engine

D) To supply fuel to the injector

Answer Key: A

Question No. 51

Pascal's law is related to-

A) Velocity

B) Temperature

C) Density

D) Pressure

Answer Key: D

Question No. 52

The steering system is used to control the-

A) Supply of engine oil

B) Supply of water to the heat exchanger

C) Direction of the vehicle

D) Pressure inside the cylinder

Answer Key: C

Question No. 53

What are the advantages of the power harrow?

A) Fine soil preparation

B) Strong levelling effect

C) Prevention of hardpan

D) All of the options

Answer Key: D

Question No. 54

The _____ is a harrow having curved stiff blades attached to a transverse horizontal frame.

- A) Acme harrow
- C) Spike-tooth harrow

- B) Drag harrow
- D) Disc harrow

Answer Key: A

Question No. 55

Ohm's law explains the relationship between electric current and-

- A) Impedance
- C) Conductivity
- B) High EMF
- D) Potential difference

Answer Key: D

Question No. 56

Which of the following gauges measures voltage, resistance and current?

- A) Ammeter
- C) Potentiometer
- B) Voltmeter
- D) Multimeter

Answer Key: D

Question No. 57

Free electrons are almost zero in-

- A) Conductors
- C) Semiconductors
- B) Insulators
- D) None of the options

Answer Key: B

Question No. 58

A thermocouple is an electrical device consisting of-

- A) Two dissimilar electrical conductors
- C) Two similar electrical conductors
- B) One electrical conductor
- D) Three similar electrical conductors

Answer Key: A

Question No. 59

The single-pole double-throw (SPDT) relay has a total of-

- A) Two terminals
- C) Four terminals
- B) Three terminals
- D) Five terminals

Answer Key: D

Question No. 60

A tool which is used for removing weeds and for loosening the soil is known as-

- A) Hoe
- C) Cultivator
- B) Seed drill
- D) Mower

Answer Key: A

Question No. 61

The _____ is a farm implement that cuts hay or small grain crops and is also known as swathers.

- A) Plank
- B) Cultivator
- C) Windrower
- D) Harrows

Answer Key: C

Question No. 62

A _____ is a machine that cuts grass or other plants that grow on the ground.

- A) Dozer
- B) Tiller
- C) Mower
- D) Either a dozer or tiller

Answer Key: C

Question No. 63

Which stub axle type has an L-shaped spindle instead of a yoke-type hinge?

- A) Elliot type stub axle
- B) Reversed Elliot type stub axle
- C) Lamoine type stub axle
- D) Reversed Lamoine type stub axle

Answer Key: C

Question No. 64

The purpose of the differential in a vehicle is to-

- A) Change the direction of power flow
- B) Increase the torque of the axle shafts
- C) Reduce the speed of the axle shafts
- D) Permit unequal rotation of the drive wheels when the vehicle is making a turn

Answer Key: D

Question No. 65

In the case of a CI engine, ignition takes place at constant-

- A) Pressure
- B) Temperature
- C) Volume
- D) Heat

Answer Key: A

Question No. 66

A power tiller is a/an _____ tractor widely used for rotary or revolving cultivation in wet puddle soil.

- A) Riding
- B) Walking
- C) Orchard
- D) Earth moving

Answer Key: B

Question No. 67

Which type of brake system is normally available on crawler tractors?

- A) Internal contracting shoe type
- B) External contracting shoe type
- C) Disc type
- D) Hydraulic type

Answer Key: B

Question No. 68

_____ is the distance between the centers of the front and rear wheels.

- A) Wheelbase
- B) Ground clearance
- C) Wheel track
- D) Wheel travel

Answer Key: A

Question No. 69

Which of the following is used for chasing or reconditioning damaged threads?

- A) Circular split die
- B) Half die
- C) Adjustable screw plate die
- D) Die nut

Answer Key: D

Question No. 70

Which type of vehicle is used for hitching agricultural implements?

- A) Jeep
- B) Tractor
- C) Tipper
- D) Minivan

Answer Key: B

Question No. 71

What is the recommended grade oil to use in engines below minus 10 °F?

- A) SAE 5W
- B) SAE 25W
- C) SAE 20W
- D) SAE 30W

Answer Key: A

Question No. 72

Who among the following is closely related with electromagnetic induction?

- A) Seebeck
- B) Newton
- C) Faraday
- D) Maxwell

Answer Key: C

Question No. 73

The _____ valve is completely open during suction stroke.

- A) Inlet
- B) Exhaust
- C) Fuel injection
- D) Both inlet and exhaust

Answer Key: A

Question No. 74

Piezoelectric energy converts-

- A) Chemical energy to mechanical energy
- B) Chemical energy to solar energy

C) Mechanical energy to electrical energy

D) Solar energy to mechanical energy

Answer Key: C

Question No. 75

The main function of the rotor is to-

A) Generate magnetic field

B) Generate direct current

C) Transmit power

D) Transfer the energy

Answer Key: A