PROVISIONAL ANSWER KEY

Question Paper Code:	184/2026/OL
Category Code:	778/2025
Exam:	Mechanic (Direct Recruitment)
Date of Test	26-11-2026
Department	Agriculture Development And Farmers Welfare Department

Question1:-
The base unit of length as per the systems International is

A:-
Metre

B:-
Centimetre

C:-
Millimetre

D:-Micrometre

Correct Answer:- Option-A

Question2:-
Calipers are used along with steel rules, and the accuracy is limited to _____, parallelism of jobs etc.

A:-
0.02mm

B:-
0.01mm

C:-
0.5mm

D:-1mm

Correct Answer:- Option-C

Question3:-
The _____ point punch is used for making light punch marks needed to position dividers.

A:-
90°

B:-
60°

C:-
45°

D:-30°

Correct Answer:- Option-D

Question4:-
Surface plate used for machine shop work are available in _____ grades.

A:-
Four

B:-
Three

C:-
Two

D:-One

Correct Answer:- Option-B

Question5:-
_____ calipers have one leg with an adjustable divider point, while the other is a bent leg.

A:-
Outside

B:-
Inside

C:-
Jenny

D:-Divider

Correct Answer:- Option-C

Question6:-
This is the striking portion. A slight convexity is given to it to avoid digging of the edge. It is used for striking while chipping, bending etc.

A:-
Face

B:-
Pein

C:-
Cheek

D:-Eye hole

Correct Answer:- Option-A

Question7:-
This is used for holding small work which requires filing or drilling and for marking of small jobs on the surface plate.

A:-
Pipe vice

B:-
Toolmaker's vice

C:-
Pin vice

D:-Hand vice

Correct Answer:- Option-B

Question8:-
Try squares are specified according to the length of the

A:-
Stock and blade

B:-
Stock or blade

C:-
Stock

D:-Blade

Correct Answer:- Option-D

Question9:-
This is used to measure the depth of keyways and depth of smaller Dia, blind holes of jobs, where the ordinary steel rule cannot reach

A:-
Narrow steel rule

B:-
Short steel rule

C:-
Steel rule with tapered end

D:-Flexible steel rule

Correct Answer:- Option-A

Question10:-
_____ is defined as a standard or fixed quantity of one kind used to measure other quantities of the same kind.

A:-
Fundamental unit

B:-
Derived unit

C:-
Unit

D:-System of units

Correct Answer:- Option-C

Question11:-
This file has a flat, triangular face with teeth on the wide face only. It is used for finishing sharp corners.

A:-
Mill saw file

B:-
Barrette file

C:-
Crossing file

D:-Riffle file

Correct Answer:- Option-B

Question12:-
_____ Pitch of the blade is used to cut tool steel, high carbon steel and high-speed steel.

A:-
1.8 mm

B:-
0.8 mm

C:-
mm

D:-1.4 mm

Correct Answer:- Option-D

Question13:-
These chisels are used for cutting keyways, grooves and slots.

A:-
Cross cut or cape chisels

B:-
Half round nose chisels

C:-
Diamond point chisels

D:-Web chisels

Correct Answer:- Option-A

Question14:-
The angle formed by the primary or secondary clearances and the tangent to the periphery of the reamer at the cutting edge

A:-
Taper lead angle

B:-
Rake angle

C:-
Clearance angle

D:-Helix angle

Correct Answer:- Option-C

Question15:-
This refers to the shaping of the wheel to make it run concentric with the axis.

A:-
Loading

B:-
Glazing

C:-
Dressing

D:-Truing

Correct Answer:- Option-D

Question16:-
The vernier bevel protractor is a precision instrument meant for measuring angles to an accuracy of

A:-
1 minute

B:-
5 minutes

C:-
1 second

D:-5 seconds

Correct Answer:- Option-B

Question17:-
It is the algebraic difference between a size, to its corresponding basic size. It may be positive, negative or zero.

A:-
Limits

B:-
Tolerance

C:-
Deviation

D:-Zero line

Correct Answer:- Option-C

Question18:-
Sine bar is a rectangular bar made of

A:-
Stainless steel

B:-
Stabilized chromium steel

C:-
Mild steel

D:-High carbon steel

Correct Answer:- Option-B

Question19:-
Which type of fixtures are used for parts that require machining on evenly spaced surfaces ?

A:-
Indexing fixture

B:-
Plate fixture

C:-
Angle plate fixture

D:-Vice jaw fixture

Correct Answer:- Option-A

Question20:-
What is the inspection grade of slip gauge ?

A:-
Grade I

B:-
Grade II

C:-
Grade 00

D:-Grade 0

Correct Answer:- Option-D

Question21:-
The thickness of the plate is 't', diameter of the rivet is

A:-
$d = 4\sqrt{t}$

B:-
$d = 6\sqrt{t}$

C:-
$d = 6\sqrt{2t}$

D:-$d = 4\sqrt{2t}$

Correct Answer:- Option-B

Question22:-
Due to slip of the belt, the velocity ratio of the belt drive

A:-
Decreases

B:-
Does not change

C:-
Increases

D:-None of these

Correct Answer:- Option-A

Question23:-
The nominal included angle of a 'V' belt is

A:-
20°

B:-
15°

C:-
25°

D:-40°

Correct Answer:- Option-D

Question24:-
Which tool is used to support the already formed head of a rivet and prevent damage to its

shape during riveting ?

A:-
Rivet set

B:-
Caulking tool

C:-
Dolly

D:-Snap

Correct Answer:- Option-C

Question25:-
Which type of clutch provides a positive drive and can be engaged only when the two elements are stationary or are gently moved by hand ?

A:-
Cone clutch

B:-
Centri fugal clutch

C:-
Multi plate clutch

D:-Dog clutch

Correct Answer:- Option-D

Question26:-
Which instrument is used to measure the high temperature inside a furnace ?

A:-
Thermometer

B:-
Pyrometer

C:-
Barometer

D:-Colorimeter

Correct Answer:- Option-B

Question27:-
Brass is the combination of

A:-
Copper and Zinc

B:-
Copper and Tin

C:-
Copper and led

D:-Copper and Nickel

Correct Answer:- Option-A

Question28:-
What is the process of reducing iron or to pig iron by chemical reduction is known as ?

A:-
Charging

B:-
Smelting

C:-
Roasting

D:-Sintering

Correct Answer:- Option-B

Question29:-
Cast iron is produced from which furnace ?

A:-
Blast furnace

B:-
Puddling furnace

C:-
Cupola furnace

D:-None of these

Correct Answer:- Option-C

Question30:-
Which metal is resist to many types of acid ?

A:-
Chromium

B:-
Nickel

C:-
Tin

D:-Lead

Correct Answer:- Option-D

Question31:-
Which tool is used to localize heat in the hearth by keeping the outer ring wet and concentrating the heat at the centre of the Hearth ?

A:-
Rake

B:-
Sprinkler

C:-
Poker

D:-None of these

Correct Answer:- Option-B

Question32:-
Which one is not included in the main refractory materials ?

A:-
Lime stone

B:-
Fireclay bricks

C:-
Dinas bricks

D:-Talc bricks

Correct Answer:- Option-A

Question33:-
Which part of the anvil used for bending and rounding operations ?

A:-
Face

B:-
Upsetting block

C:-
Beak

D:-None of these

Correct Answer:- Option-C

Question34:-
A Fork tool is used for

A:-
Upsetting the round steel bars

B:-
Bending the round steel bars

C:-
Flattering the round bars

D:-Drawing out of the round bars

Correct Answer:- Option-B

Question35:-
Which of the following is not a part of a leg vice ?

A:-
Spindle

B:-
Pivot

C:-
Ratchet

D:-Spring

Correct Answer:- Option-C

Question36:-
The nozzle size is used in gas welding for 1.6 mm plate thickness is

A:-
1

B:-
18

C:-
10

D:-3

Correct Answer:- Option-D

Question37:-
In gas welding when the electrode cable is connected to the positive terminal, it is called

A:-
Straight polarity

B:-
Reverse polarity

C:-
Negative polarity

D:-None of these

Correct Answer:- Option-B

Question38:-
The flame temperature of oxy – Acetylene gas flame in gas welding is

A:-
3100° C – 3300°C

B:-
2400°C – 2700°C

C:-
2700°C – 2800°C

D:-1800°C – 2200°C

Correct Answer:- Option-A

Question39:-
The equipment used for mixing and controlling the flow of gases to the welding nozzle is

A:-
Pressure regulator

B:-
Welding nozzle

C:-
Welding torch

D:-Welding chamber

Correct Answer:- Option-C

Question40:-
The valve of acetylene gas cylinder have

A:-
Right hand thread

B:-
Left hand thread

C:-
Right and left hand thread

D:-None of these

Correct Answer:- Option-B

Question41:-
In sheet metal work the hammer used for finish the wired edges is

A:-
Creasing hammer

B:-
Hollowing hammer

C:-
Planishing hammer

D:-Bullet hammer

Correct Answer:- Option-A

Question42:-
Name the stake which is used for turning up flanges on metal discs.

A:-
Funnel stake

B:-
Hatchet stake

C:-
Bick iron stake

D:-Half-moon stake

Correct Answer:- Option-D

Question43:-
Which seam is used to join two pieces of straight or curved metal of light gauge and locking them by a groover ?

A:-
Grooved seam

B:-
Double seam

C:-Lap seam

D:-Single seam

Correct Answer:- Option-A

Question44:-
Which type of metal sheets are used for making acid tanks ?

A:-
Black iron

B:-
Lead

C:-
Copper

D:-Galvanised iron

Correct Answer:- Option-B

Question45:-
Name the mallet which is used for following panel beatings in sheet metal work.

A:-
Standard wooden mallet

B:-
End - faked mallet

C:-
Bossing mallet

D:-None of these

Correct Answer:- Option-C

Question46:-
In a lathe machine the back gear unit is engaged for

A:-
Reducing the spindle speed

B:-
Increasing the spindle speed

C:-
For taper turning

D:-None of these

Correct Answer:- Option-A

Question47:-
The slope between the front of the cutting edge to a line perpendicular to the axis of the lathe tool drawn downwards which is known as

A:-
Side clearance angle

B:-
Side rake angle

C:-
Front clearance angle

D:-Top rake angle

Correct Answer:- Option-C

Question48:-
Knurling is a _____ operation.

A:-
Cutting

B:-
Forming

C:-
Threading

D:-Chamfering

Correct Answer:- Option-B

Question49:-
Carbide tipped lathe tools are used for

A:-
Deep cut only

B:-
Deep cut and slow speed

C:-
Low speed only

D:-Deep cut and high speed

Correct Answer:- Option-D

Question50:-
For turning small taper on long work pieces, the suitable method is

A:-
By a form tool

B:-
Compound rest swivelling

C:-
Tail stock set over

D:-By taper turning attachment

Correct Answer:- Option-C

Question51:-
Which of the following statement/s is/are true about a Tractor running in top gear ?
i. RPM and Torque of the Gear Box is same as that of the engine
ii. RPM and Torque of the Gear Box is different from that of the engine
iii. RPM is more than that of the Torque

A:-
i and iii

B:-
Only ii

C:-
Only iii

D:-Only i

Correct Answer:- Option-D

Question52:-
Which of the following statement/s is/are NOT true about a clutch ?
i. It is part of a power transmission system
ii. It dams vibration and shocks
iii. It slips under high torque transmission

A:-
Only i

B:-
i and ii

C:-
Only iii

D:-ii and iii

Correct Answer:- Option-C

Question53:-
Which component of a transmission system Transmits engine power either only to rear wheels or to all the four wheels of the vehicle according to the driving needs ?

A:-
Differential

B:-
Clutch

C:-
Gear Box

D:-Transfer Case

Correct Answer:- Option-D

Question54:-
On which law does the hydraulic brake work ?

A:-
Newton's Third Law

B:-
Law of Momentum

C:-
Pascal's Law

D:-Law of Conservation

Correct Answer:- Option-C

Question55:-
What is the function of a tie-rod ?

A:-
To transfer forces from the steering gear

B:-
To keep stability

C:-
To avoid wear and tear of the front wheel

D:-To control the rear wheel

Correct Answer:- Option-A

Question56:-
The tiller clutch is also known as

A:-
Tiller accelerator

B:-
Tiller brake or tiller lock

C:-
Hitching device

D:-Rotator control unit

Correct Answer:- Option-B

Question57:-
In wet soil, which implement is used as a ploughing media ?

A:-
Rubber tyre

B:-
Cage wheel

C:-
Cultivator

D:-PTO

Correct Answer:- Option-B

Question58:-
What is the function of the release bearing in a clutch system ?

A:-
To start the engine

B:-
To transfer force from the clutch pedal to the pressure plate

C:-
To release the connection of the PTO from the gearbox

D:-To increase the rotational capacity of the crankshaft

Correct Answer:- Option-B

Question59:-
Which of the following implements is used in hard soil ?

A:-
Cultivator

B:-
Disc harrow

C:-
Tiller rotor

D:-Lawn mower

Correct Answer:- Option-B

Question60:-
What is hitching ?

A:-
It is the process of jacking up the vehicle

B:-
Connecting implements with the tractor

C:-
Turning the tiller left or right

D:-Normal ploughing

Correct Answer:- Option-B

Question61:-
The specific gravity of electrolyte in a fully charged lead acid battery is approximately

A:-
1.000

B:-
1.150

C:-
1.270

D:-1.500

Correct Answer:- Option-C

Question62:-
Which instrument is used to measure the specific gravity of battery electrolyte ?

A:-
Voltmeter

B:-
Ammeter

C:-
Hydrometer

D:-Tachometer

Correct Answer:- Option-C

Question63:-
The main purpose of hitching agricultural implements, Elements to a tractor is to :

A:-
Increase engine temperature

B:-
Connect the implement to the tractor for operation

C:-
Reduce the fuel tank capacity

D:-Increase tyre pressure

Correct Answer:- Option-B

Question64:-
Which component of a tractor is commonly used to raise and lower mounted implements ?

A:-
Differential

B:-
Hydraulic three-point linkage

C:-
Clutch pedal

D:-Steering gearbox

Correct Answer:- Option-B

Question65:-
Which implement is used for intercultivation and seedbed preparation with a seeding attachment ?

A:-
Disc harrow

B:-
Cultivator

C:-
Rotavator

D:-Blade harrow

Correct Answer:- Option-B

Question66:-
What is the primary purpose of cage wheels in a paddy field ?

A:-
To increase forward speed

B:-
To improve traction and reduce wheel slippage in wet soil

C:-
To increase transport speed on roads

D:-To reduce engine power

Correct Answer:- Option-B

Question67:-
The rear shield of a rotavator mainly helps to :

A:-
Regulate engine speed

B:-
Control soil scattering and pulverization

C:-
Operate the hydraulic lift

D:-Transmit power from the engine

Correct Answer:- Option-B

Question68:-
The power for a tractor-operated rotary mower is generally transmitted through the :

A:-
Drawbar only

B:-
Power Take Off shaft

C:-
Steering mechanism

D:-Brake system

Correct Answer:- Option-B

Question69:-
The power tiller is primarily classified as a :

A:-
Four-wheel tractor

B:-
Walking-type tractor

C:-
Crawler tractor

D:-Track-laying tractor

Correct Answer:- Option-B

Question70:-
Which clutch arrangement is commonly used in power tillers to facilitate steering and turning ?

A:-
Differential lock only

B:-
Steering clutches

C:-
Centrifugal pump clutch

D:-PTO clutch only

Correct Answer:- Option-B

Question71:-
Which component in a vehicle's propeller shaft assembly accommodates changes in the effective length of the shaft caused by suspension movement ?

A:-
Slip Joint

B:-
Universal joint

C:-
Differential pinion

D:-Centre support bearing

Correct Answer:- Option-A

Question72:-
What primary parameter does a tachometer on a car's instrument cluster Measure ?

A:-
Vehicle travel speed in km/h or mph

B:-
Engine oil pressure

C:-
Total distance traveled by the vehicle

D:-Engine crankshaft rotational speed in RPM

Correct Answer:- Option-D

Question73:-
Which component is placed between the engine cylinder block and the cylinder head to seal the combustion chamber and prevent coolant or oil leaks ?

A:-
Valve guide

B:-
Crankshaft seal

C:-
Piston ring

D:-Head gasket

Correct Answer:- Option-D

Question74:-
Which instrument on a vehicle's dashboard records and displays the total distance traveled by the vehicle over its lifetime ?

A:-
Speedometer

B:-
Tachometer

C:-
Odometer

D:-Tripmeter

Correct Answer:- Option-C

Question75:-
Why is the intake valve head generally designed to be larger in diameter than the exhaust valve head in a typical internal combustion engine ?

A:-
To maximize volumetric efficiency by reducing resistance to incoming fresh air-fuel mixture

B:-
To allow exhaust gases to escape faster under high pressure

C:-
To prevent thermal distortion of the intake valve at high operating temperatures

D:-To reduce the overall weight of the valvetrain assembly

Correct Answer:- Option-A

Question76:-
What is the primary operational advantage of a Dual Mass Flywheel (DMF) compared to a traditional Single Mass Flywheel (SMF) ?

A:-
It reduces overall manufacturing cost and clutch replacement complexity

B:-
It dampens torsional vibrations from the engine before they reach the transmission

C:-
It increases the maximum power output of the engine at high RPMs

D:-It eliminates the need for a starter motor ring gear

Correct Answer:- Option-B

Question77:-
Which of the following is considered a conventional suspension system ?

A:-
Coil spring suspension system

B:-
Torsion bar suspension system

C:-
Leaf spring suspension system

D:-Wishbone suspension system

Correct Answer:- Option-C

Question78:-
In a constant mesh gearbox, how are different gear ratios engaged while shifting gears ?

A:-
By physically sliding mainshaft gears into mesh with lay-shaft gears

B:-
By sliding dog clutches along the splined mainshaft to lock specific gears

C:-
By expanding friction brake bands around the planetary gear set

D:-By shifting the position of the lay-shaft relative to the input shaft

Correct Answer:- Option-B

Question79:-
What is the main function of the differential unit in a vehicle during cornering ?

A:-
To allow the outer driven wheel to rotate faster than the inner driven wheel

B:-
To increase overall engine power output

C:-
To lock both driven wheels so they rotate at the exact same speed

D:-To disconnect power from the wheels while changing gears

Correct Answer:- Option-A

Question80:-
In a synchromesh gearbox, what component equalizes the rotational speeds of the selected gear and the output shaft before full engagement occurs ?

A:-
Friction clutch plate

B:-
Countershaft gear

C:-
Synchronizer ring

D:-Differential pinion

Correct Answer:- Option-C

Question81:-
Which statement is true for Tandem Master cylinder ?

A:-
Used in Air Brake Systems

B:-
Contains three Check Valves

C:-
Failure of one Brake line also affect the other one

D:-Contains two separate cylinders in same body

Correct Answer:- Option-D

Question82:-
What is the fucnction of Brake Proportionating Valve ?

A:-
Prevent front wheels lock up as the vehicle's weight shined towards rear wheels when braking

B:-
Prevent from entering air into Hydraulic Brake System

C:-
Prevent rear wheels lock up as the vehicle's weight is shifted towards front wheels when braking

D:-Helps to remove air from Brake lines

Correct Answer:- Option-C

Question83:-
Which part is associated with Disc Brakes ?

A:-
Brake Pad

B:-
Brake Shoe

C:-
Wheel cylinder

D:-None of them

Correct Answer:- Option-A

Question84:-
Which of the following is not correct for Independent Suspension System ?

A:-
Using Coil Springs

B:-
Spring weight is less

C:-
Shocks are transmitted from one wheel to opposite wheel

D:-Vibration damping is more effective

Correct Answer:- Option-C

Question85:-
What is the function of H C V in Air Suspension System ?

A:-
Dictate how much air is in the Air tank

B:-
Dictate how much air is in the Air Bellows

C:-
Dictate how much air is compressed by the Air Compressor

D:-Dictate the hydraulic pressure in the Bellows

Correct Answer:- Option-B

Question86:-
Which property of lubricating oil indicates its resistance to flow ?

A:-
Flash point

B:-
Viscosity

C:-
Cloud point

D:-
Volatility

Correct Answer:- Option-B

Question87:-
A diesel engine has excessive blow-by gases entering the crank case. Which defect is a likely cause ?

A:-
A stuck-open thermostat

B:-
Worn or damaged piston rings

C:-
A blocked radiator grill

D:-Excessive coolant concentration

Correct Answer:- Option-B

Question88:-
An engine's oil pressure is abnormally low even though the oil level is correct. Which combination of faults could cause this condition ?

A:-
A blocked radiator and a faulty thermostat

B:-
Excessive bearing clearances and a worn oil pump

C:-
A worn fan belt and dirty air filter

D:-A faulty glow-plug and a blocked exhaust pipe

Correct Answer:- Option-B

Question89:-
What is the function an engine of the oil pressure relief valve in an engine lubrication system ?

A:-
To increase fuel pressure

B:-
To maintain oil pressure with in a controlled range

C:-
To prevent coolant circulators

D:-To adjust valve clearance

Correct Answer:- Option-B

Question90:-
Which tool is commonly used to tighten cylinder-head bolts to a specified torque ?

A:-
Torque wrench

B:-
Pipe wrench

C:-
Feeler gauge

D:-Valve spring compressor

Correct Answer:- Option-A

Question91:-
What may happen if the piston ring end gap is too small ?

A:-
The ring ends may butt together when hot, causing damaged

B:-
The radiator will stop circulating coolant

C:-
The fuel injection pressure will become zero

D:-The crankshaft will rotate twice as fast

Correct Answer:- Option-A

Question92:-
Which part of a piston ring helps remove excess lubricating oil from the cylinder wall ?

A:-
Compression ring

B:-
Oil control ring

C:-
Piston pin

D:-Connecting rod bearing

Correct Answer:- Option-B

Question93:-
Why should the cylinder head surface be checked for fatness before reassembly ?

A:-
To ensure proper sealing with the head gasket and reduce the risk of leakage

B:-
To increase the piston stroke

C:-
To change the engine firing order

D:-To increase the water pump delivery pressure

Correct Answer:- Option-A

Question94:-
A diesel engine produces excessive blue exhaust smoke and consumes too much lubricating oil. Which condition is a likely cause ?

A:-
Worn piston rings or excessive cylinder wear

B:-
A thermostat opening at the specified temperature

C:-
Correct valve timing

D:-A clean radiator

Correct Answer:- Option-A

Question95:-
Which statement is true ?
i. Waste gate is part of the emission control system
ii. Waste gate is part of the cooling system
iii. Waste gate is part of the lubrication system
iv. Waste gate is part of the turbocharger system

A:-
Statement i only

B:-
Statement iv only

C:-
Both statements i and ii

D:-Both statements i and iv

Correct Answer:- Option-B

Question96:-
What is the primary function of a DPF in a diesel engine ?

A:-
Reduce evaporative emissions

B:-
Reduce HC and CO

C:-
Reduce soot and PM

D:-Reduce NOx emissions

Correct Answer:- Option-C

Question97:-
Which statements are true ?
i. Intercooler helps to reduce the temperature of intake air
ii. Intercooler helps to increase the density of intake air
iii. Intercooler helps to increase power and torque
iv. Intercooler is part of the fuel system

A:-
Statement i only

B:-
Statement iv only

C:-
Both statements i and ii

D:-Statements i, ii, and iii

Correct Answer:- Option-D

Question98:-
Which unit regulates the exact volume of fuel entering the high pressure pump based on signals from the ECU ?

A:-
Metering unit

B:-
Rail pressure sensor

C:-
MAP sensor

D:-Electronic feed pump

Correct Answer:- Option-A

Question99:-
What is the speed ratio between the crankshaft and an inlinetype FIP in a diesel engine ?

A:-
1:2

B:-
2:1

C:-
1:3

D:-1:4

Correct Answer:- Option-B

Question100:-
Which type of nozzle is used in CRDI engines ?

A:-
Single-hole type

B:-
Pintle type

C:-
Pintaux type

D:-Multi-hole type

Correct Answer:- Option-D