

PROVISIONAL ANSWER KEY

Question 165/2023/OL

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Code:

Exam: Machinist (SR for SC/ST)

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Department Ground Water

Question1:-What is the expanded form of ABC in first aid?

A:-Airway, blood and circulation

B:-Aspiration, blood and circulation

C:-Airway, breathing and circulation

D:-Aspiration, breathing and circulation

Correct Answer:- Option-C

Question2:-Which one of the following is the personal safety?

A:-Stop the machine before changing the speed

B:-Never lean on the machine

C:-Don't leave the machine which is in motion

D:-Keep the floor and gangways clean

Correct Answer:- Option-B

Question3:-What is the standard colour code used for identifying warning signs?

A:-Red

B:-Blue

C:-Yellow

D:-Green

Correct Answer:- Option-C

Question4:-Which type of extinguisher is used for class 'B' fire?

A:-Foam extinguisher

B:-Dry powder extinguisher

C:-Halon extinguisher

D:-Carbon dioxide extinguisher

Correct Answer:- Option-D

Question5:-What is the meaning of 'Seiri' in 5S of Japanese methodology?

A:-Sort

B:-Set

C:-Standardize

D:-Shine

Correct Answer:- Option-A

Question6:-What is the full form of PPE in safety?

A:-Personal property and equipment

B:-Personal productive equipment

C:-Pollution prevention equipment

D:-Personal protective equipment

Correct Answer:- Option-D

Question7:-Blue colour waste bin indicates for

A:-Plastic

B:-Paper

C:-Metal

D:-Food

Correct Answer:- Option-B

Question8:-Which term refers that needed items to be kept in correct place for easy handling as per 5S concept?

A:-Set

B:-Sustain

C:-Sort

D:-Standardize

Correct Answer:- Option-A

Question9:-Which is correct attitude for common soft skills?

A:-Problem solving skills

B:-Team work

C:-Good communication skills

D:-All of the above

Correct Answer:- Option-D

Question10:-What is the immediate life saving procedure to the injured person?

A:-Call doctor

B:-Go to hospital

C:-First aid

D:-Treatment

Correct Answer:- Option-C

Question11:-Which marking media provide clear lines on machine finished surface?

A:-Copper sulphate

B:-White wash

C:-Cellulose lacquer

D:-Prussian blue

Correct Answer:- Option-D

Question12:-What is the reading accuracy of steel rule?

A:-0.05 mm

B:-0.10 mm

C:-0.02 mm

D:-0.50 mm

Correct Answer:- Option-D

Question13:-How the dividers are specified?

A:-Joint and legs

B:-Joint and length

C:-Only leg

D:-Only length

Correct Answer:- Option-B

Question14:-Which caliper provide line adjustment of dimension?

A:-Inside caliper

B:-Jenny caliper

C:-Firm joint caliper

D:-Spring joint caliper

Correct Answer:- Option-D

Question15:-Which one of the following punch is used for locating centre of the holes?

A:-Prick punch

B:-Dot punch

C:-Centre punch

D:-None of the above

Correct Answer:- Option-C

Question16:-What is the other name of Bench vice?

A:-Engineer's vice

B:-Tool maker's vice

C:-Hand vice

D:-Quick releasing vice

Correct Answer:- Option-A

Question17:-Which type of hammer is used for reveting purpose?

A:-Cross-Pein hammer

B:-Straight-Pein hammer

C:-Ball-Pein hammer

D:-Sledge hammer

Correct Answer:- Option-C

Question18:-Which tool is used to finish the resharpened divider point?

A:-Grinder

B:-Scraper

C:-File

D:-Oil stone

Correct Answer:- Option-D

Question19:-Which grade of angle plates are used for general machine shop work?

A:-Grade 1

B:-Grade 2

C:-Grade 3

D:-Grade 4

Correct Answer:- Option-B

Question20:-What is the main advantage of adjustable parallel block?

A:-To set different height

B:-To set different length

C:-To set different angle

D:-To set different depth

Correct Answer:- Option-A

Question21:-What is the pitch of the spindle thread of metric micrometer?

A:-0.01 mm

B:-0.02 mm

C:-0.10 mm

D:-0.50 mm

Correct Answer:- Option-D

Question22:-Which part of a micrometer ensures a uniform pressure between the measuring faces?

A:-Thimble

B:-Ratchet stop

C:-Anvil

D:-Barrel

Correct Answer:- Option-B

Question23:-Which mechanism is used in a lever type dial test indicator make the

pointer rotation?

A:-Rack and pinion mechanism

B:-Lever and scroll mechanism

C:-Screw thread mechanism

D:-Hydraulic mechanism

Correct Answer:- Option-B

Question24:-What is the least count of a vernier caliper if 19 main scale divisions are divided in to 20 equal parts on the vernier scale?

A:-0.01 m.m

B:-0.02 m.m

C:-0.05 m.m

D:-0.10 m.m

Correct Answer:- Option-C

Question25:-Which part of the vernier bevel protractor should be kept in contact with the datum surface from which the angle is measured?

A:-Stock

B:-Disc

C:-Blade

D:-Main scale

Correct Answer:- Option-A

Question26:-What is the reason for using dial indicator instead of scriber point in vernier height gauge?

A:-For accurate marking

B:-For accurate setting

C:-For accurate measuring

D:-To check eccentricity

Correct Answer:- Option-D

Question27:-Which is the measuring instrument used for measuring the chordal thickness of a gear tooth at the pitch circle of a gear?

A:-Vernier bevel protractor

B:-Vernier caliper

C:-Vernier gear tooth caliper

D:-Vernier micrometer

Correct Answer:- Option-C

Question28:-What is the use of tube micrometer?

A:-To measure the thickness of pipes

B:-To measure the external diameter of pipes

C:-To measure the internal diameter of pipes

D:-To measure the length of pipes

Correct Answer:- Option-A

Question29:-How specify a vernier height gauge?

A:-Length of scriber

B:-Width of base

C:-Height of beam

D:-Width of beam

Correct Answer:- Option-C

Question30:-Which part of the micrometer has marked datum line?

A:-Barrel/sleeve

B:-Spindle

C:-Thimble

D:-Anvil

Correct Answer:- Option-A

Question31:-The most suitable pitch of the hacksaw blade for cutting soft material such as bronze, brass etc. is

A:-0.8 m.m

B:-1.0 m.m

C:-1.4 m.m

D:-1.8 m.m

Correct Answer:- Option-D

Question32:-Which file used for filing narrow grooves and angles above 10° ?

A:-Half round file

B:-Triangular file

C:-Square file

D:-Knife edge file

Correct Answer:- Option-D

Question33:-Which file has the parallel edges throughout the length?

A:-Flat file

B:-Bastard file

C:-Hand file

D:-Rasp cut file

Correct Answer:- Option-C

Question34:-Hand taps are available in set of three. They are first tap, second tap and third tap. What is the other name of first tap?

A:-Bottoming tap

B:-End tap

C:-Intermediate tap

D:-Taper tap

Correct Answer:- Option-D

Question35:-Which chisel is used for separating metals after chain drilling?

A:-Web chisel

B:-Flat chisel

C:-Cross cut chisel

D:-Diamond point chisel

Correct Answer:- Option-A

Question36:-Which one of the following cutting tool used for enlarging by finishing previously drilled holes to accurate sizes?

A:-Tap

B:-Die

C:-Reamer

D:-Chisel

Correct Answer:- Option-C

Question37:-What is the purpose of second cut file?

A:-Heavy reduction of material

B:-Make the job close to the finishing size

C:-Trimming the rough edges of soft metal castings

D:-Remove small quantity of material

Correct Answer:- Option-B

Question38:-What is the other name of cross cut chisel?

A:-Flat chisel

B:-Cold chisel

C:-Solid chisel

D:-Cape chisel

Correct Answer:- Option-D

Question39:-Which part of the milling machine houses all the driving mechanism for the spindle and the table feed?

A:-Base

B:-Knee

C:-Column

D:-Gearbox

Correct Answer:- Option-C

Question40:-What type of cutter having teeth at the end as well as on periphery?

A:-Slitting saw

B:-End mill cutter

C:-Slab milling cutter

D:-Side and face cutter

Correct Answer:- Option-B

Question41:-What is denoted by 100 in the specification of plain milling cutter of size $50 \times 100 \times 27$ bore, 45° ?

A:-Helix angle

B:-Bore diameter

C:-Outside diameter

D:-Length of the cutter

Correct Answer:- Option-D

Question42:-What is the formula for index crank movement for simple indexing?

A:- $N/9$

B:- $24/N$

C:- $40/N$

D:- $N/40$

Correct Answer:- Option-C

Question43:-The mechanism used for converting rotary motion into reciprocating motion or vice versa is

A:-Bevel gear

B:-Bull gear and pinion

C:-Rack and pinion

D:-Worm and worm wheel

Correct Answer:- Option-C

Question44:-Which standard number of cutter is used to cutting gear tooth of involutes profile of 12 teeth?

A:-No. 1

B:-No. 3

C:-No. 6

D:-No. 8

Correct Answer:- Option-D

Question45:-The tooth proportions of spur gears are expressed in terms of

A:-Module

B:-Outside diameter

C:-Addendum

D:-Pitch diameter

Correct Answer:- Option-A

Question46:-The radial distance between the pitch circle and the outside circle is called

A:-Addendum

B:-Dedendum

C:-Working depth

D:-Clearance

Correct Answer:- Option-A

Question47:-The imaginary circle on which two mating gears seems to be rolling is called

A:-Land

B:-Root circle

C:-Pitch circle

D:-Clearance

Correct Answer:- Option-C

Question48:-A spur gear with pitch circle diameter PD and number of teeth N. The module m is defined as

A:- $m = PD/N$

B:- $m = N/OD$

C:- $m = \pi PD/N$

D:- $m = PDN$

Correct Answer:- Option-A

Question49:-A gear has a module of 2 mm and the number of teeth is 24, what is the pitch diameter of that gear wheel?

A:-24 mm

B:-36 mm

C:-48 mm

D:-60 mm

Correct Answer:- Option-C

Question50:-What is the line generated by the progressive rotation of a point around a cylinder?

A:-Spiral

B:-Helix

C:-Bevel

D:-Taper

Correct Answer:- Option-B

Question51:-What is the property of oil that the oil can with stand high pressure without squeezing from bearing surface?

A:-Oilness

B:-Viscosity

C:-Pour point

D:-Flash point

Correct Answer:- Option-B

Question52:-How many numbers are in metric tap set?

A:-1

B:-2

C:-3

D:-4

Correct Answer:- Option-C

Question53:-What is the formula to find out RPM of drill?

A:- $\frac{d \times 1000}{V \times \pi}$

B:- $\frac{d \times \pi}{V \times 1000}$

C:- $\frac{V \times 1000}{d \times \pi}$

D:- $\frac{d \times V}{\pi \times 1000}$

Correct Answer:- Option-C

Question54:-What is the formula to find tap drill size in general purpose?

A:-Major diameter minus pitch

B:-Major diameter minus 1 × pitch

C:-Major diameter minus 2 × pitch

D:-Major diameter minus 3 × pitch

Correct Answer:- Option-A

Question55:-Which portion of drill the flutes are cut?

A:-Body

B:-Tang

C:-Shank

D:-Point

Correct Answer:- Option-A

Question56:-What is termed as peripheral speed of drill?

A:-Feed

B:-Depth of cut

C:-Cutting speed

D:-Rpm of spindle

Correct Answer:- Option-C

Question57:-What is the point angle of drill for drilling mild steel?

A:-80°

B:-90°

C:-118°

D:-120°

Correct Answer:- Option-C

Question58:-Thermal stability is one of the _____ of a good lubricant

A:-Quality

B:-Purpose

C:-Property

D:-All of these

Correct Answer:- Option-C

Question59:-What is name of the gear unit of the lathe which consists of three gears, each having same number of teeth?

A:-Spindle gear

B:-Fixed stud gear

C:-Change gear unit

D:-Tumbler gear unit

Correct Answer:- Option-D

Question60:-Which type of lathe is more suitable for mass production?

A:-Bench lathe

B:-Centre lathe

C:-Speed lathe

D:-Capstan and turret lathe

Correct Answer:- Option-D

Question61:-Which part of the lathe provided means of supporting the tool rest which holds the cutting tool?

A:-Top slide

B:-Head stock

C:-Cross slide

D:-Compound rest

Correct Answer:- Option-A

Question62:-Which tool angle is ground to prevent the tool rubbing from the work in a lathe?

A:-Rake angle

B:-Clearance angle

C:-End cutting edge angle

D:-Side cutting edge angle

Correct Answer:- Option-B

Question63:-What is the accuracy of work that can be trued by 4-jaw chuck?

A:-0.02 mm

B:-0.04 mm

C:-0.05 mm

D:-0.07 mm

Correct Answer:- Option-A

Question64:-Which type of knurling tool has got one roller right hand helical teeth and others have left hand helical teeth?

A:-Cross knurling

B:-Concave knurling

C:-Straight knurling

D:-Diamond knurling

Correct Answer:- Option-D

Question65:-What is the name of the operation in a lathe for removing the metal from the work piece by feeding the tool at right angles to the axis of the work?

A:-Facing

B:-Knurling

C:-Step turning

D:-Plain turning

Correct Answer:- Option-A

Question66:-Which one of the following is the advantage of taper turning attachment over tail stock off set method?

A:-Good surface finish

B:-Lengthy taper can be produced

C:-Job can be held between centres

D:-Power feed can be given for both internal and external taper

Correct Answer:- Option-D

Question67:-The grade of slip gauges are used for general workshop application is?

A:-Grade I accuracy

B:-Grade 'O' accuracy

C:-Grade 'OO' accuracy

D:-Grade 2 accuracy

Correct Answer:- Option-D

Question68:-The act of joining the slip gauges together while building up to the sizes is called

A:-Wringing

B:-Sliding

C:-Glazing

D:-Loading

Correct Answer:- Option-A

Question69:-Cutting speed is expressed in

A:-mm/minute

B:-km/minute

C:-meter/minute

D:-inch/minute

Correct Answer:- Option-C

Question70:-A plug gauge which has GO and NO GO sizes on the same end is known as?

A:-Single ended plug gauge

B:-Double ended plug gauge

C:-Progressive plug gauge

D:-Continuous plug gauge

Correct Answer:- Option-C

Question71:-Pedestal grinder comes under the category of

A:-Rough grinding machines

B:-Cylindrical grinding machines

C:-Off-hand grinding machines

D:-Surface grinding machines

Correct Answer:- Option-C

Question72:-The type of cutting tool material used in CNC turning is

A:-High speed steel tools

B:-Coated carbide tools

C:-CBN tools

D:-Option (B) and (C)

Correct Answer:- Option-D

Question73:-Which of the statement is true with the programming of VMC?

(i) MDI mode is used for copying part programme in VMC

(ii) Auto mode is used for copying part programme in VMC

(iii) Jog mode is used for copying part programme in VMC

A:-(i) only

B:-(ii) only

C:-(i) and (ii) only

D:-(ii) and (iii) only

Correct Answer:- Option-B

Question74:-Which of the following statements are correct in the case of a bench grinding machine?

A:-The wheel guard helps to retain fragments of the wheel if it breaks

B:-Preventing the fitting of a wheel that is too large for the machine

C:-Protecting the operator from coming in contact with the rotating wheel

D:-All of the above

Correct Answer:- Option-D

Question75:-PCLNL 25 25 M is a kind of tool holder in CNC turning. The letter 'C' indicates

A:-Insert clamping method

B:-Insert shape

C:-Holder style

D:-Insert clearance angle

Correct Answer:- Option-B

Question76:-Which one of the statements is true with the G code of VMC?

(i) G 83 is used for back boring cycle in FANUC

(ii) G 85 is used for back boring cycle in FANUC

(iii) G 87 is used for back boring cycle in FANUC

A:-(i) and (ii) only

B:-(ii) only

C:-(iii) only

D:-(ii) and (iii) only

Correct Answer:- Option-C

Question77:-Which of the following statement is true with a vertical spindle surface grinding machine?

A:-The face or sides of the wheel are used for grinding

B:-Grinding is performed by the periphery of the wheel

C:-Work is held with bare hands

D:-None of the above

Correct Answer:- Option-A

Question78:-G 02 code refers to the function of

A:-Rapid traverse

B:-Linear interpolation

C:-CW circular interpolation

D:-CCW circular interpolation

Correct Answer:- Option-C

Question79:-Which one of the statement is correct with the machining operations in CNC milling?

- (i) Side milling is done in point to point system
- (ii) Face milling is done in point to point system
- (iii) Drilling is done in point to point system

A:-(i) only

B:-(i) and (iii) only

C:-(ii) only

D:-(iii) only

Correct Answer:- Option-D

Question80:-The work is held between centres for grinding operation. On which machine this operation can be performed?

A:-Off-hand grinding machine

B:-Cylindrical grinding machine

C:-Bench grinding machine

D:-Vertical spindle surface grinding machine

Correct Answer:- Option-B

Question81:-The M code for the function coolant on

A:-M 08

B:-M 00

C:-M 01

D:-M 05

Correct Answer:- Option-A

Question82:-Which one of the statement is true with the CNC machine stoppage due to power shut down?

A:-CNC On button is pressed to restart the machine from power shut down

B:-CNC Off button is pressed to restart the machine from power shut down

C:-Auto cycle button is pressed to restart the machine from power shut down

D:-Jog mode is On to restart the machine from power shut down

Correct Answer:- Option-C

Question83:-For grinding high carbon steel, which type of abrasive can be used?

A:-Aluminium oxide

B:-Silicon carbide

C:-Tungsten carbide

D:-None of the above

Correct Answer:- Option-A

Question84:-The disadvantage of open loop control system is

A:-There is a provision for feedback signal to be compared with the input signal

B:-They do not have provision for feedback signal to be compared with the input signal

C:-Not suitable for profile turning

D:-Not suitable for straight cutting

Correct Answer:- Option-B

Question85:-Which one of the statements is true with the tool life of CNC machines?

A:-The equation for tool life is $v_T^n = C$

B:-The equation for tool life is $L = \frac{\pi DN}{1000}$

C:-The equation for tool life is $L = \frac{S(n)}{F}$

D:-The equation for tool life is $v_L^n = C$

Correct Answer:- Option-A

Question86:-A-16-P-5-V-BE denotes the specification of a grinding wheel. The number 16 belongs to

A:-Medium to hard grade of bond

B:-Structure of the wheel

C:-Find grain size

D:-Coarse grain size

Correct Answer:- Option-D

Question87:-Which statement is not correct with the use of ball screw in CNC lathe?

A:-No stick-slip

B:-Higher transmission efficiency

C:-High coefficient of friction

D:-Higher mechanical efficiency

Correct Answer:- Option-C

Question88:-Which one of the following statement is true with the VMC?

A:-The 'X' axis movement is transverse

B:-The 'X' axis movement is left and right

C:-The 'X' axis movement is up

D:-The 'X' axis movement is down

Correct Answer:- Option-B

Question89:-The cause of the defect glazing is due to the

A:-Grinding soft materials on a hard grade bonded wheel

B:-Vibration of the work

C:-Grinding hard materials on a hard grade bonded wheel

D:-Uneven application of pressure on the wheel

Correct Answer:- Option-C

Question90:-Which statement is true with the absolute mode?

A:-The coordinates of a point are always referred with reference to the same datum

B:-The coordinates of any point are calculated with reference to the previous point

C:-The coordinates of a point are always different from the previous point

D:-None of these

Correct Answer:- Option-A

Question91:-Which one of the statement is true with the tooling system in CNC?

A:-The letter 'H' indicates geometry offset

B:-The letter 'H' indicates work offset

C:-The letter 'H' indicates wear offset

D:-The letter 'H' indicates tool length offset

Correct Answer:- Option-D

Question92:-The phenomenon happens when small particles of the material being ground become embedded in the space between the grains of the grinding wheel is

A:-Dressing

B:-Grooving

C:-Loading

D:-Truing

Correct Answer:- Option-C

Question93:-The process of work offset in CNC lathe is

A:-Setting the job at correct coordinates

B:-Setting the job and set the tool to touch the face of the job and the diameter of the job

C:-Setting of the tool at the correct reference point

D:-Setting the job at correct axis according to the length of the tool

Correct Answer:- Option-B

Question94:-Which one of the statement is true with the M code in CNC?

A:-M 04 S 500 indicates spindle rotation CW 500 rpm

B:-M 04 S 500 indicates spindle rotation CCW 500 rpm

C:-M 04 S 500 indicates cutting feed rate of 500 mm/rev

D:-M 04 S 500 indicates cutting speed of 500 m/min

Correct Answer:- Option-B

Question95:-Which of the following statement is true with the selection of an

abrasive wheel for a particular job?

A:-Kind of material to be ground

B:-Amount of material to be removed

C:-The surface finish required

D:-All of the above

Correct Answer:- Option-D

Question96:-The function of JOG mode

A:-It helps to set the job quickly

B:-It allows correct control by processing the feed direction switch on the operator panel

C:-It allows manual programming

D:-It helps to control the movement of the tool

Correct Answer:- Option-B

Question97:-Which of the statement is true with work holding in VMC?

A:-The work is set on a machine vice with the help of a dial test indicator

B:-The work is set on the machine vice with the help of a try square

C:-The work is set on the machine vice with the help of a parallel block

D:-The work is set on the angle plate with the help of screw gauge

Correct Answer:- Option-A

Question98:-Which machine is suitable for grinding the point angle of a twist drill accurately?

A:-Bench grinder

B:-Tool and cutter grinder

C:-Pedestal grinder

D:-Cylindrical grinder

Correct Answer:- Option-B

Question99:-The causes of CNC machine crash

A:-Setting of wrong tool inside the ATC tool pocket

B:-Input of wrong tool length

C:-Setting very high rpm

D:-Option (1) and (2)

Correct Answer:- Option-D

Question100:-Which of the statements is true with the safety of VMC?

A:-To avoid machine collision auto cycle is used

B:-To avoid machine collision simulation is used

C:-To avoid machine collision manual method is used

D:-To avoid machine collision jog method is used

Correct Answer:- Option-B