

PROVISIONAL ANSWER KEY

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Question1:-

What is the main purpose of Personal Protective Equipment ?

A:-

To replace machines

B:-

To decorate the workplace

C:-

To increase work speed

D:-

To minimize exposure to work place hazard

Correct Answer:- Option-D

Question2:-

Which of the following is classified as respiratory protective equipment ?

A:-

Ears protection

B:-

Respirator

C:-

Safety foot wear

D:-

Helmet

Correct Answer:- Option-B

Question3:-

Which of the following is a correct safety practice ?

A:-

Adjust the tool while the power is on

B:-

Engage in conversation while working

C:-

Stop a running machine with hands

D:-

Check the oil level before starting the machine

Correct Answer:- Option-D

Question4:-

Which category of safety sign is triangular in shape ?

A:-

Prohibition sign

B:-

Warning sign

C:-

Mandatory sign

D:-

Information sign

Correct Answer:- Option-B

Question5:-

Hot work mainly process which type hazard ?

A:-

Biological hazard

B:-

Noise hazard

C:-

Ergonomics hazard

D:-

Fire and exposure hazard

Correct Answer:- Option-D

Question6:-

Choose the correct statement about 5S concept.

- i. Seiri - Set in order
- ii. Seiso - Shine
- iii. Seiton - Sort
- iv. Seiketsu - Standardize

A:-

i and iv

B:-

ii and iv

C:-

ii only

D:-

i and iii

Correct Answer:- Option-B

Question7:-

Choose correct statement about waste material colour code.

- i. Paper - Blue
- ii. Glass - Black
- iii. Plastic - Green

iv. Metal - Red

A:-

i and iii

B:-

iii and iv

C:-

i and iv

D:-

ii and iv

Correct Answer:- Option-C

Question8:-

Winches are used to

A:-

Lift vertically only

B:-

Pull heavy loads along the ground

C:-

Cut metals

D:-

Rotate machine

Correct Answer:- Option-B

Question9:-

What is the name of joint two parts welded in the same plain ?

A:-

Lap joint

B:-

Butt joint

C:-

Tee joint

D:-

Edge joint

Correct Answer:- Option-B

Question10:-

Which one of the following flame is used to the under water gas cutting of steel ?

A:-

Oxy-acetylene flame

B:-

Oxy-LPG flame

C:-

Oxy-hydrogen flame

D:-

Air-acetylene flame

Correct Answer:- Option-C

Question11:-

The distance between the end of the contact tube and the tip of the electrode is known as

A:-

Stick out

B:-

Arc length

C:-

Leg length

D:-

Stick length

Correct Answer:- Option-A

Question12:-

The melting point of solder is

A:-

Below 220°C

B:-

Below 320°C

C:-

Below 420°C

D:-

Below 520°C

Correct Answer:- Option-C

Question13:-

Which type of the power source is used for MIG welding ?

A:-

Constant current

B:-

Constant voltage

C:-

Variable current

D:-

Variable voltage

Correct Answer:- Option-B

Question14:-

Which one of the following is not a function of flux ?

A:-

Remove oxides

B:-

Helps the flow of molten metal

C:-

Acts as cleaning agent

D:-

Increase the joint strength

Correct Answer:- Option-D

Question15:-

SMAW stands for

A:-

Shielded Metal Arc Welding

B:-

Shielded Manual Arc Welding

C:-

Scheduled Metal Arc Welding

D:-

Scheduled Manual Arc Welding

Correct Answer:- Option-A

Question16:-

What is the extreme permissible size within which the operator is expected to make the component ?

A:-

Basic size

B:-

Actual size

C:-

Nominal size

D:-

Limits of size

Correct Answer:- Option-D

Question17:-

What is the difference between the maximum limit of size and minimum limit of size ?

A:-

Limit

B:-

Allowance

C:-

Tolerance

D:-

Fit

Correct Answer:- Option-C

Question18:-

What are the alloying elements of stainless steel ?

A:-

Chromium and silicon

B:-

Chromium and nickel

C:-

Chromium and manganese

D:-

Chromium and tungsten

Correct Answer:- Option-B

Question19:-

Which is the accuracy of Metric Vernier Micrometer ?

A:-

0.01 mm

B:-

0.02 mm

C:-

0.001 mm

D:-

0.0001 mm

Correct Answer:- Option-C

Question20:-

Which marking tool used for scribing lines parallel to an edge ?

A:-

Divider

B:-

Trammel

C:-

Outside Caliper

D:-

Jenny Caliper

Correct Answer:- Option-D

Question21:-
One centimeter is equal to

A:-

0.394 Inch

B:-

0.254 Inch

C:-

0.454 Inch

D:-

0.493 Inch

Correct Answer:- Option-A

Question22:-

Which is the accuracy of try square ?

A:-

0.02 mm/10 mm

B:-

0.002 mm/10 mm

C:-

0.001 mm/10 mm

D:-

0.01 mm/10mm

Correct Answer:- Option-B

Question23:-

What is the material of Micrometer frame ?

A:-

Mild steel

B:-

High Carbon Steel

C:-

Stainless Steel

D:-

Malleable Cast Iron

Correct Answer:- Option-D

Question24:-

What is the angle of V slot in VEE block ?

A:-

60 degree

B:-

90 degree

C:-

100 degree

D:-

120 degree

Correct Answer:- Option-B

Question25:-

Which are the measuring angles of Square Head in combination set ?

A:-

90 degree and 60 degree

B:-

90 degree and 30 degree

C:-

90 degree and 45 degree

D:-

90 degree and 120 degree

Correct Answer:- Option-C

Question26:-

Which punch is used for locating center of Drill Hole ?

A:-

Center punch

B:-

Hollow punch

C:-

Dot punch

D:-

Prick punch

Correct Answer:- Option-A

Question27:-

Divider points are re-sharpened better by

A:-

Grinding wheel

B:-

File

C:-

Oil stone

D:-

Both 1 and 2

Correct Answer:- Option-C

Question28:-

Which statement is correct about slip gauge ?

- i. Slip gauges are made from H.S.S.
- ii. Grade 1 slip gauge sets are used for calibration
- iii. Wringing is the act of joining the slip gauges building up sizes
- iv. Slip gauges are made from chromium steel

A:-

ii only

B:-

Both iii and iv

C:-

Both i and ii

D:-

iii only

Correct Answer:- Option-B

Question29:-

Which of following is not correct among specification of lathe machine ?

A:-

Length of bed

B:-

Swing diameter over the bed

C:-

Swing diameter over the carriage

D:-

Length of centre

Correct Answer:- Option-D

Question30:-

Which part of a lathe machine slides over the bed ?

A:-

Lead screw

B:-

Spindle

C:-

Tail stock

D:-

Compound rest

Correct Answer:- Option-C

Question31:-

Which part is belongs to a 3 jaw chuck ?

A:-

Fingerpin

B:-

Crown wheel

C:-

Face ring

D:-

Screw shaft

Correct Answer:- Option-B

Question32:-

Which is the use of back gear ?

A:-

To reverse spindle

B:-

To reduce friction

C:-

To reduce spindle speed

D:-

To cut threads

Correct Answer:- Option-C

Question33:-

American pillar type tool post is also known as

A:-

British tool post

B:-

Quick change tool post

C:-

Single way tool post

D:-

Four way tool post

Correct Answer:- Option-C

Question34:-

Which lathe part is assembled to the saddle with the help of a tapered jib ?

A:-

Cross slide

B:-

Compound slide

C:-

Carriage

D:-

Tail stock

Correct Answer:- Option-A

Question35:-

Which taper turning method is used to cut short and steep taper ?

A:-

Tail stock offset method

B:-

Set over tail stock method

C:-

Taper turning attachment method

D:-

Swivelling the compound rest method

Correct Answer:- Option-D

Question36:-

Which type of thread is on lathe lead screw ?

A:-

Square thread

B:-

Buttress thread

C:-

Acme thread

D:-

Worm thread

Correct Answer:- Option-C

Question37:-

Which part of lathe machine consists top slide ?

A:-

Compound rest

B:-

Cross slide

C:-

Sliding ways

D:-

Tool post

Correct Answer:- Option-A

Question38:-

Which arrangement provided for swing larger diameter work piece on lathe machine ?

A:-

Collect chuck

B:-

Magnetic chuck

C:-

Gap bed

D:-

Bar feeding

Correct Answer:- Option-C

Question39:-

Name the machine tool used to remove metal from a job, while feeding against a rotating multipoint cutting tool.

A:-

Lathe machine

B:-

Shaping machine

C:-

Planing machine

D:-

Milling machine

Correct Answer:- Option-D

Question40:-

Aluminium oxide which is used for the production of cutting tools are commonly known as

A:-

Ceramics

B:-

Stellites

C:-

Carbides

D:-

Abrasives

Correct Answer:- Option-A

Question41:-

Choose the correct statement from the following, regarding the cutting speed $V = \frac{\pi dn}{1000}$ of a milling machine.

A:-

d = diameter of cutter in mm and n = cutter speed in revolution per minute

B:-

d = diameter of work in mm and n = cutter speed in rpm

C:-

d = diameter of cutter in meter and n = cutter speed in revolution per second

D:-

V = cutting speed in meter per hour

Correct Answer:- Option-A

Question42:-

If Pd = Pitch diameter, Z = Number of teeth, P = Circular pitch, df = Root diameter and h = Height of teeth regarding a spur gear, the module m is found by the formula

A:-
$$m = \frac{Z}{Pd}$$

B:-
$$m = \frac{Pd}{Z}$$

C:-
$$m = P/Z$$

D:-

$$m = Z/h$$

Correct Answer:- Option-B

Question43:-

Which one of the following is not a specification of a Milling machine ?

A:-
Spindle nose taper

B:-
Number of feeds

C:-
Floor space area

D:-

Tonnage of machine

Correct Answer:- Option-D

Question44:-

If a work is fed in the same direction as the rotation of cutter, the method of milling is known as

A:-

Up milling

B:-

End milling

C:-

Down milling

D:-

Straddle milling

Correct Answer:- Option-C

Question45:-

Choose the best statement regarding Up milling method, the removal of chip by each cutting edge.

A:-

Starts at the thinnest part and progress to the thickest part

B:-

Starts at the thickest part and progress to the thinnest part

C:-

Starts and ends with same thickness

D:-

Has no effect on chips

Correct Answer:- Option-A

Question46:-

The rate at which a work piece advances under a milling cutter is termed

A:-

Speed

B:-

Depth of cut

C:-

Cutting speed

D:-

Feed

Correct Answer:- Option-D

Question47:-

State the milling operation in which both the Up and Down milling may be considered to be performed simultaneously on the work surface

A:-

Face milling

B:-

End milling

C:-

Peripheral milling

D:-

Gang milling

Correct Answer:- Option-A

Question48:-

In milling process, the perpendicular distance measured between the original and the final surface of a work piece is termed

A:-

Initial dimension

B:-

Final dimension

C:-

Feed rate

D:-

Depth of cut

Correct Answer:- Option-D

Question49:-

Aluminium oxide grinding wheels are suitable for grinding

i. High tensile and tough materials.

ii. All types of steels.

iii. Non-ferrous materials.

A:-

Only i and iii are correct

B:-

Only ii and iii are correct

C:-

Only i and ii are correct

D:-

i, ii and iii are correct

Correct Answer:- Option-C

Question50:-

Which determines the 'hardness' or 'softness' of an abrasive wheel ?

A:-

Amount or grade of bond

B:-

Amount of abrasive particles

C:-

Type of abrasive

D:-

1 and 2 above

Correct Answer:- Option-A

Question51:-

A universal tool and cutter grinder is

- i. Used in tool rooms.
- ii. Used to resharpen single point cutting tools.
- iii. Used to resharpen multi point cutting tools.

A:-

Only i is correct

B:-

Only ii is correct

C:-

Only iii is correct

D:-

i, ii and iii are correct

Correct Answer:- Option-D

Question52:-

The wheel head of a tool and cutter grinder

- i. has two grinding wheels.
- ii. can be swivelled to the required angle.
- iii. can be moved up and down.

A:-

Only i is correct

B:-

Only ii is correct

C:-

Only iii is correct

D:-

i, ii and iii are correct

Correct Answer:- Option-D

Question53:-

Specification of tool and cutter grinder

- i. Maximum diameter of the wheel that can be held in the spindle.
- ii. Maximum height of the job that can be ground.
- iii. Number of spindle speeds available.

A:-

Only i is correct

B:-

Only ii is correct

C:-

Only i and ii are correct

D:-

i, ii and iii are correct

Correct Answer:- Option-C

Question54:-

Tooth rest is

- i. used to support each individual tooth of a milling cutter during resharpener.
- ii. a device used to protect the tooth of milling cutter during loading to the machine.
- iii. used to avoid contact of milling cutter tooth with job surface during setting.

A:-

Only i is correct

B:-

Only ii is correct

C:-

Only iii is correct

D:-

i, ii and iii are correct

Correct Answer:- Option-A

Question55:-

Silicate bond

- i. large diameter wheels are produced with.
- ii. Milder cutting action than vitrified bond.
- iii. Most of the abrasive wheels are produced with.

A:-

Only i is correct

B:-

Only i and ii are correct

C:-

Only iii is correct

D:-

i, ii and iii are correct

Correct Answer:- Option-B

Question56:-

The degree of bond determines

- i. the quantity of bond used in a grinding wheel.
- ii. whether the abrasive grains in a grinding wheel are held lightly or firmly.
- iii. the quality of bond used in a grinding wheel.

A:-

Only i is correct

B:-

Only ii is correct

C:-

Only iii is correct

D:-

i, ii and iii are correct

Correct Answer:- Option-B

Question57:-

Manual Pulse Generator (MPG) mode is mainly used for

A:-

Automatic machining

B:-

Fine manual positioning

C:-

Manual program editing

D:-

Manual tool measurement

Correct Answer:- Option-B

Question58:-

The G. Code used for return to reference position in FANUC control system

A:-

G00

B:-

G96

C:-

G28

D:-

G21

Correct Answer:- Option-C

Question59:-

LM guide ways are used in CNC machine tools due to

i. Reduce heat generation.

ii. Zero stick slip.

iii. Reduce the heat smoothness.

A:-

Only i and iii

B:-

Only ii and iii

C:-

Only ii

D:-

Only i and ii

Correct Answer:- Option-D

Question60:-

Which device is commonly used as feedback element in closed loop system ?

A:-

Actuator

B:-

Solenoid

C:-

Relay

D:-

Encoder

Correct Answer:- Option-D

Question61:-

M01 command is effective only when the

A:-

Feed Override is ON

B:-

Optional stop switch ON

C:-

Single block switch ON

D:-

Program end

Correct Answer:- Option-B

Question62:-

Rotational axis that corresponds to the Z axis is

A:-

A-axis

B:-

B-axis

C:-

C-axis

D:-

D-axis

Correct Answer:- Option-C

Question63:-

Which factors must be considered during process planning ?

- i. Maching sequence.
- ii. Tool selection.
- iii. Machine capability.

A:-

Only i and ii

B:-

Only ii and iii

C:-

Only i and iii

D:-

All i, ii and iii

Correct Answer:- Option-D

Question64:-

Important factors effecting the tool life are

- i. Surface feed.
- ii. Feed rate.
- iii. Depth of cut.

A:-

All i, ii and iii

B:-

Only i and iii

C:-

Only i and ii

D:-

Only ii and iii

Correct Answer:- Option-A

Question65:-

Which type of bush is used in a jig to perform more than one operation at the same location ?

A:-

Plain bush

B:-

Slip bush

C:-

Fixed bush

D:-

Liner bush

Correct Answer:- Option-B

Question66:-

What is the purpose of grooves provided in 'V' blocks ?

A:-

Reduce vibration

B:-

Support the work piece

C:-

Accommodate the clamp

D:-

Improve rigidity

Correct Answer:- Option-C

Question67:-

Which type of fixture is used for machining evenly spaced surfaces ?

A:-

Hydraulic fixture

B:-

Vice jaw fixture

C:-

Indexing fixture

D:-

Angle plate fixture

Correct Answer:- Option-C

Question68:-

Why are two or four hold-down slots provided in the base plate of milling fixture ?

A:-

For rigid clamping

B:-

For chip removal

C:-

For adjusting the job setting

D:-

For locating the job

Correct Answer:- Option-A

Question69:-

Which bush is used to provide a hardened hole for renewable bushes ?

A:-

Slip bush

B:-

Fixed bush

C:-

Plain bush

D:-

Liner bush

Correct Answer:- Option-D

Question70:-

Which part restrict incorrect loading of a component in a jig ?

A:-

Press fit bush

B:-

Ejector pin

C:-

Locating pin

D:-

Clamp

Correct Answer:- Option-C

Question71:-

Why are tenons are provided at the bottom of base plate of a milling fixture ?

A:-

For clamping purpose

B:-

For guiding the tool

C:-

For vibration absorption

D:-

For proper location of fixture

Correct Answer:- Option-D

Question72:-

What is the purpose of setting blocks used in a fixture ?

A:-

Position the balancing weight

B:-

Adjust cutting speed

C:-

Position the fixture on machine table

D:-

Position the fixture and work related to cutter

Correct Answer:- Option-D

Question73:-

Which form of energy is converted in a hydraulic pump ?

A:-

Thermal energy to hydraulic energy

B:-

Electrical energy to hydraulic energy

C:-

Chemical energy to hydraulic energy

D:-

Mechanical energy to hydraulic energy

Correct Answer:- Option-D

Question74:-

Which valve permits fluid flow in one direction and blocks flow in opposite direction ?

A:-

Check valve

B:-

Shuttle valve

C:-

Directional control valve

D:-

Pressure control valve

Correct Answer:- Option-A

Question75:-

Which valve protects a hydraulic system against excessive pressure ?

A:-

Gate valve

B:-

Flow control valve

C:-

Relief valve

D:-

Check valve

Correct Answer:- Option-C

Question76:-

What is the operating voltage range of electro pneumatics systems ?

A:-

8V-110V

B:-

12V-220V

C:-

25V-225V

D:-

200V-440V

Correct Answer:- Option-B

Question77:-

Write the correct statement related regarding overcut in EDM ?

- i. It is the distance the spark will penetrate the workpiece from the tool and remove metal from workpiece.
- ii. Overcut decreases with higher current and increases with higher frequency.
- iii. It causes fillet and radii on the internal corner of the workpiece.
- iv. It is generally 0.025 to 0.2 mm on all surface.

A:-

i and ii

B:-

ii and iii

C:-

i, ii, iii and iv

D:-

i, iii and iv

Correct Answer:- Option-D

Question78:-

Which EDM circuit results in higher electrode wear and lower material removal rate ?

A:-

Pulse type

B:-

Relaxation type

C:-

Impulse type

D:-

Hybrid type

Correct Answer:- Option-B

Question79:-

Match the following related to Plastics.

- | | |
|-----------------------|---|
| i. Plasticizers | 1. Improve strength, dimensional stability |
| ii. Heat stabilizers | 2. Create an endothermic cooling reaction |
| iii. Flame retardants | 3. Increase there flexibility, resilience and melt flow |
| iv. Fillers | 4. Prevents degradations of plastic subjected to high temperature |

A:-

i-3, ii-2, iii-4, iv-1

B:-

i-1, ii-4, iii-2, iv-3

C:-

i-3, ii-4, iii-2, iv-1

D:-

i-1, ii-2, iii-4, iv-3

Correct Answer:- Option-C

Question80:-

Name the parts which are not located on the moving half of a two-plate injection mould.

A:-

Rest button

B:-

Register ring

C:-

Heel block

D:-

Ejector pin

Correct Answer:- Option-B

Question81:-

What is the percentage of shrinkage of polycarbonate used in plastic moulding ?

A:-

0.4 to 0.6

B:-

1.5 to 2.5

C:-

0.6 to 0.8

D:-

1.5 to 3

Correct Answer:- Option-C

Question82:-

Write the correct statement regarding the ejection method.

- i. To provide a positive ejection around a local core pin D shaped ejector pin used.
- ii. Sleeve ejection method uses a Hollow ejector pin.
- iii. When ejecting slender parts pin ejection is most suitable.
- iv. Larger diameter ejector pin used in valve ejection.

A:-

ii and iv

B:-

i, iii and iv

C:-

ii

D:-

i and ii

Correct Answer:- Option-A

Question83:-

What is the name of the screw used in an injection moulding machine in which there is no flight in the melting zone ?

A:-

Local mixing screws

B:-

Extended mixing screws

C:-

Low shear screw

D:-

Barrier screws

Correct Answer:- Option-C

Question84:-

Which document is used to track mould life ?

A:-

Process sheet

B:-

Tool drawing

C:-

Inspection report

D:-

History sheet

Correct Answer:- Option-D

Question85:-

Which moulding process is most suitable for manufacturing multicolour/material plastic components ?

A:-

Index moulding

B:-

Blow moulding

C:-

Compression moulding

D:-

Reaction injection moulding

Correct Answer:- Option-A

Question86:-

Which of the following statements about plastic moulding defects is incorrect ?

- i. Blisters are the prominent stretch mark on the surface of the molding.
- ii. If the ejector pin sunk below the core a boss will be formed on the molding.
- iii. If two or more advancing fronts are formed they meet to form a weld line.
- iv. Sink mark are the localized contractions on the surface of the molding.

A:-

ii and iii

B:-

i

C:-

i and iii

D:-

ii and iv

Correct Answer:- Option-B

Question87:-

In mould cooling arrangements, which system consists of a brass sheet entering the hole to divide the volume into two equal parts and is fixed to a tapered plug with markings for proper positioning ?

A:-

Spiral plug system

B:-

Baffled hole system

C:-

Bubbler system

D:-

Helical channel system

Correct Answer:- Option-B

Question88:-

Which of the following statements regarding split activation methods is incorrect ?

A:-

Timing control can be achieved in a cam track by modifying the groove profile

B:-

Delay is obtained in a dog-leg cam due to the change in angle

C:-

In a finger cam, split action occurs only after the mould is fully opened

D:-

Maximum delay can be designed in a cam track

Correct Answer:- Option-C

Question89:-

Which press tool performs more than one cutting operation at a single station in one stroke ?

A:-

Progressive tool

B:-

Compound tool

C:-

Blanking tool

D:-

Parting tool

Correct Answer:- Option-B

Question90:-

What is the process of producing a flat component where the entire periphery is cut and the cutout piece is the required part ?

A:-

Piercing

B:-

Notching

C:-

Blanking

D:-

Lancing

Correct Answer:- Option-C

Question91:-

In a piercing operation, the cutout piece (slug) is considered as

A:-

Pilot

B:-

The finished component

C:-

Scrap/waste

D:-

Blank

Correct Answer:- Option-C

Question92:-

Ejectors and shedders in press tools are used to

A:-

Increase cutting force

B:-

Remove scrap and strip from punch or die

C:-

Guide the strip

D:-

Reduce clearance

Correct Answer:- Option-B

Question93:-

Which connecting rod conveys power and motion from the main shaft to the press slide ?

A:-

Pitman

B:-

Ram

C:-

Blank holder

D:-

Plunger

Correct Answer:- Option-A

Question94:-

The piece removed by the punch while parting off is

A:-

Blank

B:-

Curf

C:-

Scrap

D:-

Product

Correct Answer:- Option-C

Question95:-

This is a continuous bending and cutting operation but no metal is cut free during this operation ?

A:-

Lancing

B:-

Dinking

C:-

Notching

D:-

Piercing

Correct Answer:- Option-A

Question96:-

Which element ensures accurate alignment of punch and die during operation ?

A:-

Pilot

B:-

Shank

C:-

Guide pillars and bushes

D:-

Stopper

Correct Answer:- Option-C

Question97:-

Which die sets are used where a high rate of production is required and accurate alignment is necessary ?

A:-

Centre pillar die set

B:-

Ball cage die set

C:-

Diagonal pillar die set

D:-

Rear pillar die set

Correct Answer:- Option-B

Question98:-

Which punch having a sleeve inside which punch is guided ?

A:-

Floating punch

B:-

Headless punch

C:-

Step head punch

D:-

Quilled punch

Correct Answer:- Option-D

Question99:-

The pilot positions the stock strip in relation with the die opening is termed as

A:-

Initialising

B:-

Registering

C:-

Positioning

D:-

Stripping

Correct Answer:- Option-B

Question100:-

Which die set is suitable for progressive rectangular working area ?

A:-

Rear pillar die set

B:-

Centre pillar die set

C:-

Four pillar die set

D:-

Diagonal pillar die set

Correct Answer:- Option-D