

1 Leakage should be checked before using oxy- acetylene welding equipment. What type of water can be used on the acetylene connection?

- A Salt water B Soap water C Hard water D Fresh water

2 The process of finishing of round holes by means of bonded abrasive stone is called ...

- A Lapping B Reaming C Boring D Honing

3 The process of imbedding the abrasive grains on a lap is called ...

- A rubbing B charging C fixing D pasting.

4 What is the correct tap drill for tapping M16 tap?

- A 14 mm B 14.16 mm C 15.03 mm D 15.08 mm

5 Which one of the following tool angle control the chip formation while plain turning.

- A Side clearance angle B Front clearance angle
C Approach angle D Top rake angle

6 In riveted joints the pitch of rivet is the minimum distance between the rivet should be three times of rivet dia. If the pitch of rivet is too close it will...

- A lead to gaping.
B be difficult for riveting.
C split the edges of joint.
D tear the metal along the centre line of the rivets.

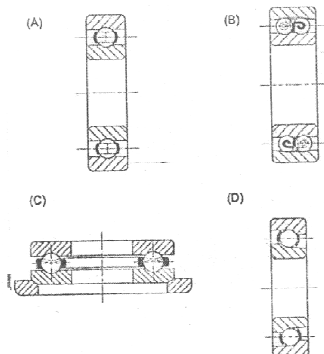
7 The jig which does not have a base but can be set over the job to be drilled is called ...

- A box jig B sandwich jig
C channel jig D trunnion jig

8 Due to continuous rubbing of the belt on the surface pulley. Belt gets dried up due to friction and heat generated. This causes the belt to slip. Which of the following material applied on the inner face of the belt for reducing belt slip?

- A Emery or corundum B Tallow or powdered resin
C Nylon or Teflon D Zinc or chalk powder

9 Which one of the following ball bearing is allowed to drive the slightly inclined shaft due to mis- alignment?



10 When more than one operation is to be performed in the same location the suitable jig bush will be ...

- A headless bush B liner bush
C slip renewable bush D headed bush

11 The length of pull type broaching tool should not exceed how many times diameter of finishing tooth...

- A 25 times B 50 times C 75 times D 100 times

12 What type of screw is used to set collar on a shaft in the position?

- A Grub screw B Machine screw
C Self tapping screw D Hammer driven screw.

13 The efficiency of machine reduce due to wear and tear with lapse of time during use. The value of machine assets reduces is considered under the head ...

- A labour cost B machine cost
C material cost D depreciation cost

14 The name of the reamer given in the figure is



- A Socket reamer B Expansion reamer
C Taper pin hand reamer D Adjustable hand reamer

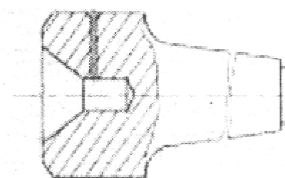
15 What is the correct tap drill for tapping M16 tap?

- A 14 mm B 14.16 mm C 15.03 mm D 15.08 mm

16 Why double cut file should not be used for filing on the metal Tin?

- A The file will not cut the metal
B The metal is hard
C The file slide on the metal instead of cutting
D The metal pieces will clog on the file.

17 The type of centre Shown in the figure is used for...



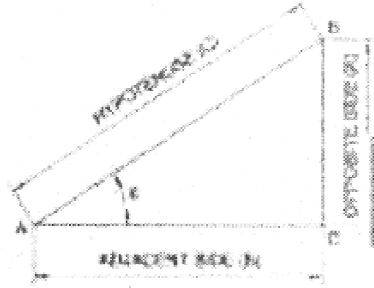
- A taper turning
B supporting pipes
C centre supporting jobs with high speed
D supporting the end of the job where no countersink hole is permitted.

18 The point angle of centre punch is ...

- A 30° B 60° C 90° D 120°

- 19 At which direction coupling transmit the rotary motion?
 A Axial direction B Right angle direction
 C Parallel axis direction D Vertical axis direction

- 20 Which side of the right angled triangle is built up with slip gauges to make the trigonometrical function for the use of sine bar?



- A Opposite side (a)
 B Adjacent side (b)
 C Hypotenuse (e)
 D Both adjacent side (b) and hypotenuse (e)

- 21 Fundamental deviation of hole or internal dimension of a part is represented by ...

- A IT01, IT0, IT1... IT16 B A,B,C...Zc
 C +/- D a,b,c.....zc

- 22 The mild steel pipes are coated with zinc is called...

- A Steel pipe B Mild steel pipe
 C ERW pipe D Galvanised iron pipe.

- 23 Which valve is used in the main water supply pipe line for the supply fully opened or closed?

- A Gate B Globe C Check D Non-return

- 24 Which one of the following seal is used between the flange joint of cold water pipe line?

- A Rubber gasket B Metallic gasket
 C Asbestos gasket D Graphite impregnated cloth

- 25 In a clearance fit the term maximum clearance refers to...

- A difference between maximum hole and minimum shaft.
 B difference between minimum hole and maximum shaft.
 C difference between maximum hole and maximum shaft.
 D difference between minimum hole and minimum shaft.

- 26 Calculate the drill size for 20 mm reamed hole using the formula, undersize of hole - 0.3mm and oversize for drill = 0.05 mm

- A 19.80 mm B 19.75 mm C 19.70 mm D 19.65 mm

- 27 The smallest division graduated on barrel of outside micrometer is...

- A 0.01 mm B 0.05 mm C 0.2 mm D 0.5 mm

- 28 When does the work piece will get charged with the abrasive and cut the lap?

- A If the workpiece is softer than the lap.
 B If the workpiece is harder than the lap.
 C If the lap is softer than the workpiece.
 D If the lap is coarser than the workpiece.

- 29 Square thread is used for.....

- A Screw jack B General purpose bolt and nut
 C Railway couplings D Spindle of micrometer

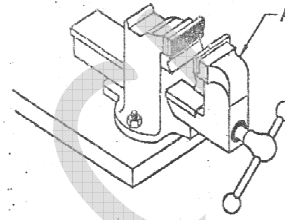
- 30 The drilled hole is larger than the size of drill used. The reason is...

- A Too much feed
 B Helix angle not accurate
 C Lip clearance not accurate
 D Unequal length of the cutting edges.

- 31 The efficiency of machine reduce due to wear and fear with lapse of time during use. The value of machine assets reduces is considered under the head ...

- A labour cost B machine cost
 C material cost D depreciation cost

- 32 What is the part name "A" given in the figure?



- A Fixed jaw B Movable jaw C Handle D Hard jaw

- 33 The hacksaw frame in which more than one standard size of blade can be fitted is called...'

- A Fixed hack saw frame
 B Tubular hack saw frame
 C Adjustable hack saw frame
 D Deep cutting hack saw frame

- 34 General composition of High Speed steel cutting tool (H.S.S) is in the ratio of 18:4:1 i in this ratio 18 refers to ...

- A Chromium B Tungston
 C Cobalt D Venadlum.

- 35 The point angle of centre punch is

- A 30° B 60° C 90° D 120°

- 36 Which valve is used in the main water supply pipe line for the supply fully opened or closed?

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- 38 Due to continuous rubbing of the belt on the surface pulley. Belt gets dried up due to friction and heat generated. This causes the belt to slip. Which of the following material applied on the inner face of the belt for reducing belt slip?

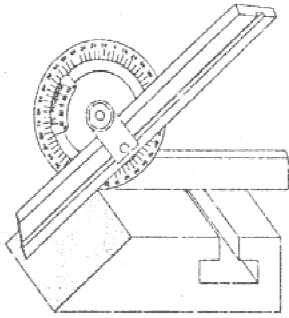
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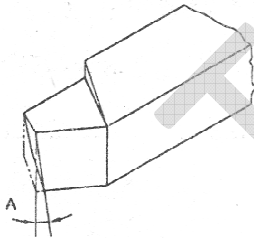
- 40 The drilled hole: is larger than the size of drill used. The reason is.....

- A Too much feed
 - B Helix angle not accurate
 - C Lip clearance not accurate
 - D Unequal length of the cutting edges.
- 41 Purpose of the rivet set used in riveting is ...
- A to remove the burr between the sheets.
 - B to align the rivet in correct position.
 - C to straighten the sheets before riveting.
 - D to bring the sheets closely together.
- 42 What type of angle is measured with vernier bevel protractor figure as shown below?

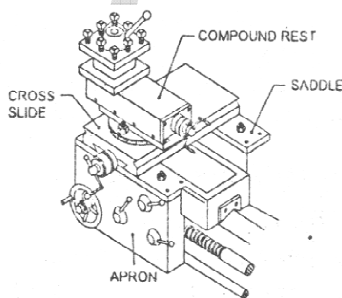


- A Straight angle
 - B Right angle
 - C Acute angle
 - D Obtuse angle.
- 43 In a clearance fit the term maximum clearance refers to ...
- A difference between maximum hole and minimum shaft.
 - B difference between minimum hole and maximum shaft.
 - C difference between maximum hole and maximum shaft.
 - D difference between minimum hole and minimum shaft.

44 Name the angle of lathe cutting tool marked 'A' in the figure.



- A Front clearance angle
 - B Side clearance angle
 - C Side rake angle
 - D End cutting edge angle
- 45 Which one of the following lathe carriage part is set for turning taper?

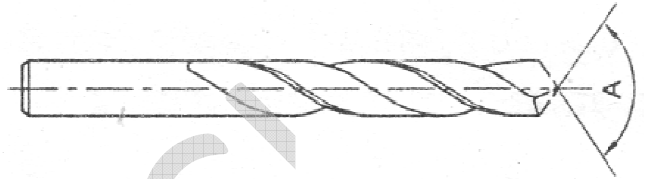


- A Cross slide
- B Compound rest
- C Saddle
- D Apron

- 46 What is the correct tap drill for tapping M16 tap?
- A 14 mm
 - B 14.16 mm
 - C 15.03 mm
 - D 15.08 mm
- 47 Where will you concentrate while chipping?
- A Head of chisel
 - B Cutting edge of chisel
 - C Head of the hammer
 - D Hand holding.

- 48 Why double cut file should not be used for filing on the metal Tin?
- A The file will not cut the metal
 - B The metal is hard
 - C The file slide on the metal instead of cutting
 - D The metal pieces will clog on the file.

49 Twist drill



- 50 What is the name of the angle 'A' shown in figure?
- A Helix angle
 - B Point angle
 - C Chisel edge angle
 - D Up clearance angle
- 51 At which direction coupling transmit the rotary motion?
- A Axial direction
 - B Right angle direction
 - C Parallel axis direction
 - D Vertical axis direction

- 52 The clearance angle of a drill for drilling mild steel job is ...
- A 3° to 5°
 - B 8° to 12°
 - C 12° to 20°
 - D 15° to 50°

- 53 The process of imbedding the abrasive grains on a lap is called ...
- A rubbing
 - B charging
 - C fixing
 - D pasting.

- 54 Which pin adjusts itself in case of wide tolerance of holes for locating in assemblies?
- A Taper pin
 - B Cotter pin
 - C Spring pin
 - D Dowel pin

- 55 Belt get slip in open belt drive, due to insufficient arc of contact of pulley... How do you reduce this type slip?
- A Put jockey pulley on slack side near smaller pulley.
 - B Put jockey pulley on tension side near to smaller pulley
 - C Put jockey pulley on slack side near to bigger pulley.
 - D Put jockey pulley on tension side near to bigger pulley.

- 56 While working on drilling machine first we select the cutting speed, to set the spindle speed (RPM) Which one of the following to be considered to select the cutting speed?
- A Job material and tool material
 - B Job material and dia of drill, type of machine
 - C Tool material and type of coolant
 - D Dia of drill and finish of job.

- 57 Why double cut file should not be used for filing on the metal Tin?
- A The file will not cut the metal
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 - C The file slide on the metal instead of cutting
 - D The metal pieces will clog on the file.

58 Square thread is used for...
 A screw jack. B general purpose bolt and nut.
 C railway couplings. D spindle of micrometer

59 Tempering is done after...
 A Annealing B Normalising
 C Hardening D Forging

60 Which device gives support to the job at one fixed place. While turning slender job on a lathe...
 A Dead centre B Revolving centre
 C Travelling steady rest D Fixed steady rest

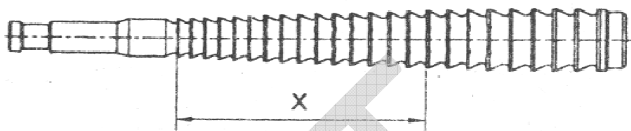
61 The reamer which has designed for end cutting is ...
 A Jig reamer B Rose reamer
 C Shell reamer D Chucking reamer

62 The function of flux during soldering is ...
 A to prevent corrosion
 B to promotes wet surface
 C to avoid porosity in solder
 D to remove oxides from the soldering surface.

63 The plug gauge with GO and NOGO ends on the same side of the gauge is ...
 A double ended plug gauge B progressive plug gauge
 C adjustable plug gauge D fixed type plug gauge

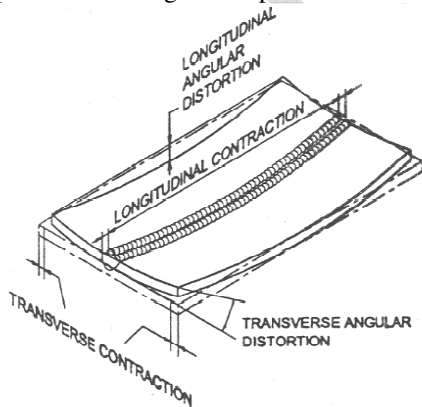
64 The jig has hinged cover and it clamped over the job to be drilled. This jig is called ...
 A sandwich jig B trunnion jig C latch jig D solid jig

65 What is the name of the part X as shown inbroach figure?



A Front pilot B Roughing teeth
 C Semi-finishing teeth D Finishing teeth

66 During gas welding, sometime the joining pieces are permanent change in shape and size from original.



The reason for this defect as shown in figure is due to ...

A Unsuitable flame setting.
 B Edge preparation is not properly done.
 C Unsuitable nozzle size is selected
 D localized, heating and cooling.

67 The movement of cutting tool causes certain lines or patterns over the surface of work piece is...
 A roughness B waviness C surface texture D lay

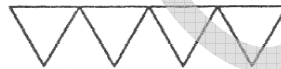
68 Travelling wall crane can shift the load in ...
 A one direction B two direction
 C three direction D four direction .

69 Which one of the following formula is applied to find the tail stock offset when turning tapers by offset method?

A $\frac{D-d}{l}$ B $\frac{D-d}{2l}$ C $\frac{D-d}{2l} \times L$ D $\frac{d-D}{2l}$

70 The pointer of Plunger type dial indicator points to 52 divisions on dial and its revolution counter shows 2 divisions. Least count of instrument is 0.01 mm. The value of reading is ...
 A 5.2 mm B 5.4 mm C 2.52 mm D 0.54 mm

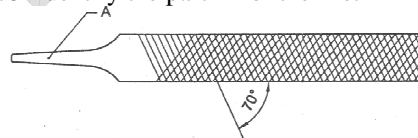
71 The figure given below is the roughness symbol of surface finish. This symbol indicate the roughness grade of...



A N1, N2 and N3 B N4, N5 and N6
 C N7, N8 and N9 D N10 and N11.

72 Which anticorrosive metal is widely used for surface coating on iron sheets for galvanising?
 A Tin B Brass C Copper D Zinc

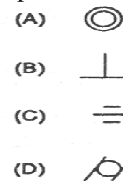
73 Identify the part 'A' of the file.



DOUBLE CUT FILE

A Shank B Shoulder C Tang D Torque

74 The symbol to represent the concentricity on drawing



75 The key has curved bottom to match the shaft. This key is known as ...

A Sunk key B Feather key
 C Flat saddle key D Hollow saddle key

76 Why the woodruff keys are used on tapered shaft hub assembly?

A It is less expensive
 B It takes heavy load
 C It takes the shear stress
 D It is easy to fit and self align with key way of hub

77 The purpose of heat treatment is ...

A to make bright
 B to change in shape

- C to produce certain required properties
- D to prevent it from rusting.

78 When nitriding in salt bath, the molten salt is splashing when the work piece is dipped. To avoid the splashing, the work piece should be

- A preheated
- B washed
- C coated with oil
- D coated with metal

79 Bolts are fitted with clearance hole in an assembly. The size of the bolt hole is slightly larger than the bolt diameter. Why?

- A To grip components firmly
- B To fasten the components
- C To adjust slight misalignment in assembly
- D To lock the components to avoid loosening of parts.

80 Belt get slip in open belt drive, due to insufficient arc of contact of pulley. How do you reduce this type slip?

- Put jockey pulley on slack side near smaller pulley.
- Put jockey pulley on tension side near to smaller pulley.
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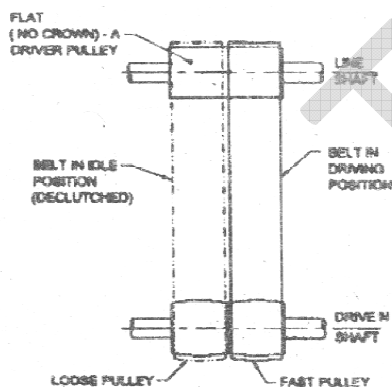
81 The efficiency of machine reduce due to wear and tear with lapse of time during use. The value of machine assets reduces is considered under the head ...

- A labour cost
- B machine cost
- C material cost
- D depreciation cost

82 Calculate the tap drill size in mm to tap M12x1 thread...

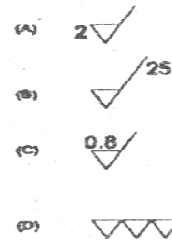
- A 9.6 mm
- B 10.8 mm
- C 11.38 mm
- D 11.62 mm

83 Generally flat pulley have a crown to run the belt centrally. In this figure, pulley driver A is not crowned. Why?



- A For slipless belt drive
- B For shifting belt drive
- C For centralized belt drive
- D For friction more belt drive

84 Which surface roughness symbol that has indicated sampling length?



85 Which range of cutting speed is suitable for turning a mild steel using H.S.S tool?

- A 15-20m/min
- B 35 - 50 m/min
- C 50-80 m/min
- D 70 - 100 m/min

86 The number of positions of fundamental deviations as per IS 919 on Limits, Fits and Tolerances are ...

- A 26 positions in alphabets
- B 25 positions in alphabets
- C 18 positions in alphabets
- D 16 positions in alphabets.

87 Optical profile projector is used to check the screw thread for its accuracy of...

- A minor diameter
- B major diameter
- C flank angle
- D helix angle

88 In which method of manual bending of sheet metal the folding line is to coincide with edge of bending tool?

- A Folding bar method
- B Hatched stake method
- C Angle iron and C clamp
- D C clamp and hard wood.

89 What coolant is used for drilling the aluminium job?

- A Dry air
- B Kerosene
- C Soluble oil
- D Mineral oil!

90 The type of key is useful on tapered fittings on shaft is known as ...

- A sunk key
- B feather key
- C woodruff key
- D hollow saddle key

91 In a clearance fit the term minimum clearance refer to...

- A difference between maximum hole and minimum shaft.
- B difference between minimum hole and maximum shaft
- C difference between maximum hole and minimum hole.
- D difference between minimum hole and basic size.

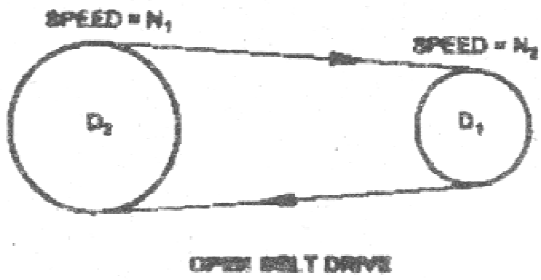
92 Various gas cutting nozzle sizes are available. For the selection of nozzle size which factor is to be considered in gas cutting?

- A Duration of cut.
- B The purity of oxygen.
- C Thickness of material.
- D Type of cutting blow pipe.

93 Which is the possible cause when a twist drill produces a rough hole on the job?

- A The clearance angle is too big.
- B The clearance angle is too small.
- C The cutting speed is too small.
- D Feed rate is too high.

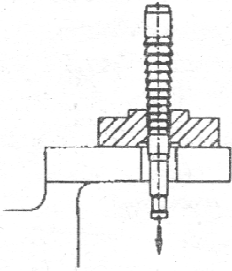
94 The figure below is an open belt drive.



The equation of velocity ratio in open belt drive , if there is no slip and creep in the transmission ...

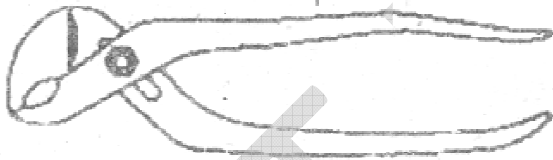
- A $N_1/D_1 = N_2/D_2$ B $N_1/D_1 = D_2/N_2$
 C $N_1/N_2 = D_2/D_1$ D $N_1/N_2 = D_1/D_2$

95 Which broaching method is used in broaching process?



- A Pull type broaching B Push type broaching
 C Surface broaching D Continuous broaching

96 Which one of the following name is correct to the figure shown?



- A Nose plier B Gas plier
 C End cutting plier D Slip joint, multi-grip pliers

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