Multiple Choice Practice Questions for Online/OMR AITT-2020

2nd Year

Turner

Trade

Theory

Form Turning

Choose the correct answer

1 Purpose of form turning to...
A Strengthen the material
B Better grip handling
C lesser grip handling
D Weakening the material

2 Formed surface can be turned by...
A Using template
B Using 'V' tool
C Using side tool D Using form tool

3 Which tool is employed in radius form turning? A Form tool, template
B 'V' tool profile gauge
C 'V' cut tool, feeler gauge D Parting tool,

depth gauge

4 Which lathe parts are used to produce form turning by free hand method ?

A Cross slide and carriage

B Carriage and tail stock C

Carriage and head stock

D Cross slide and feed shaft

5 Which gauge is used to check the radius formation on the edge of diameter ?

A Fillet gauge

B Radius gauge

C Centre gauge

D Anglegauge

6 Which range of fillet gauges are available in sets?

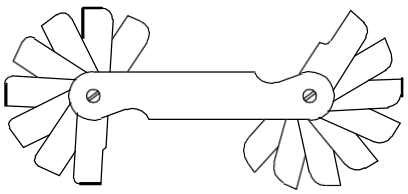
A 0 to 5mm in step of 1mm

B 0 to 8mm in step of 1mm

C 1 to 7mm in step of 0.5mm

D 0 to 10mm in step of 0.5mm

7 Name the checking instrument shown in fig



A Pitch gauge

B Centre gauge

C Radius gauge D Angle gauge

8 For what type of work templates are used?

A Various typework

D Standardization work

C Separatework

D Single work

Dial test Indicator

Choose the correct answer

1 What is the least count of metric dial test Indicator ?

A 0.1mm

B 0.01mm

C 0.02mm

D 0.2mm

2 Dial test Indicator is a...

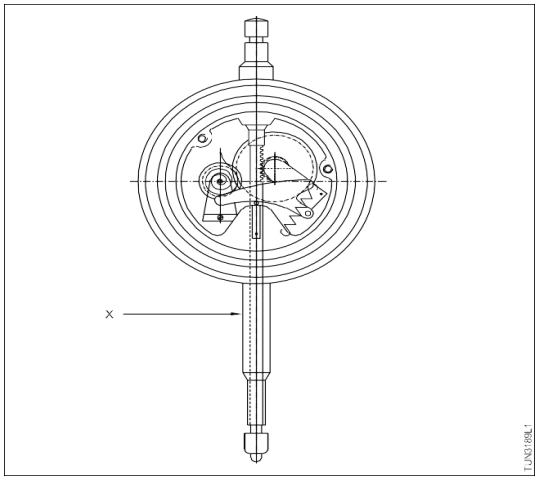
A Direct reading instrument

B Indirect readinginstrument

C Measuring gauge

D Reading gauge

3 Name the part marked as ‘X’ in the fig shown.



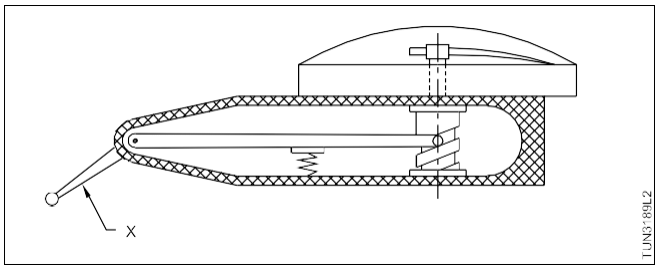
A Measuring spindle

B Guide pin

C Clamping stem

D Plunger

4 Name the part marked as X in the lever type dial test Indicator



A Pivot

B Stylus

C Lever

D Pointer

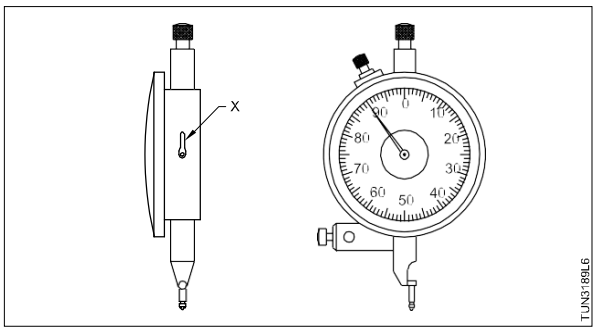
5 Name of the part marked as ‘X’ in plunger type dial test indicator

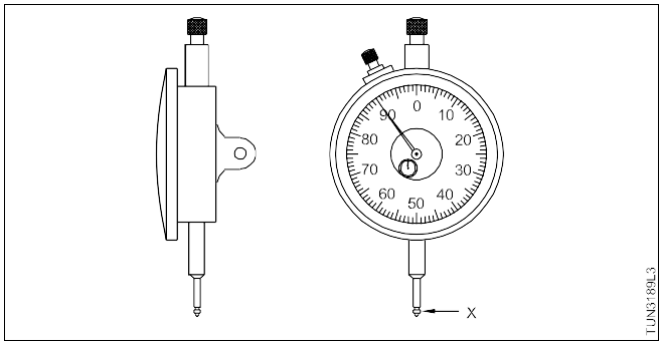
A Anvil

B Stem

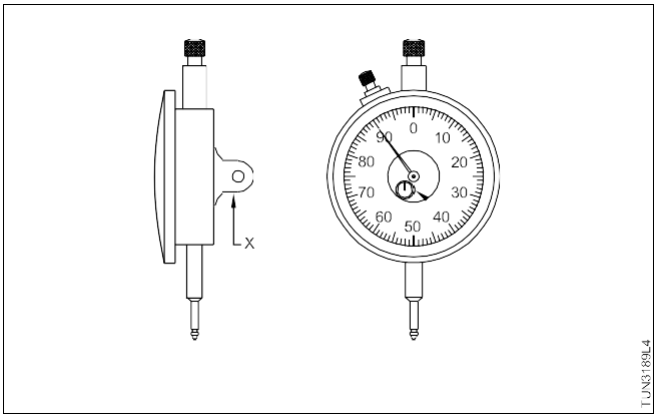
C Plunger

D Pointer





6 Name of the part marked ‘X’ in plunger type dial test Indicator



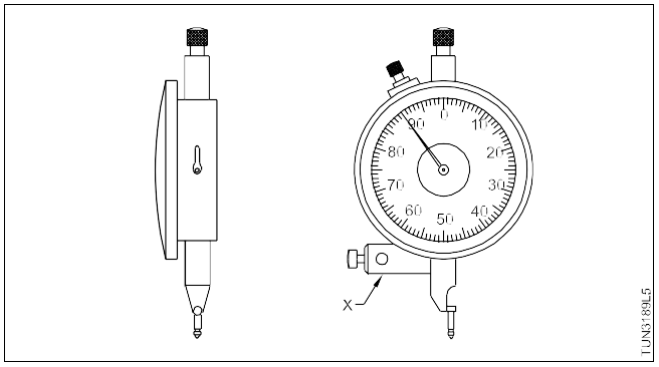
A Bazel clamp

B Back lug

C Rotatable bevel

D Stem

7 Name the part marked ‘X’ in the dial test indicator shown



A Stylus

B Body

C Pivot

D Clamp

8 Name the part marked ‘X’ in fig

A Clamp

B Stylus movement

C Body

D Reversing lever

9 Least count of sensitive dial test Indicator

A 0.001 mm

B 0.01 mm

C 0.1 mm

D 0.02 mm

10 Which part is used for clamping plunger type dial test Indicator

A Plunger

B Back lug

C Stem

D Bezel clamp

11 Which part is clamped in lever type dial test indicator

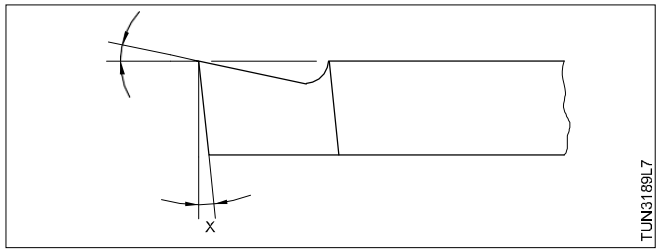
A Body

B Stylus

C Clamp

D Stems

12 Name the angle of tool marked 'X' in fig



A Rake angle

B Clearance angle

C Side clearance

D Side relief angle

13 What will be the effect, if the tool is set above the height of lathe centre ?

A Poor finish

B Rubbing the tool

C Decreased clearance angle

D Increased clearance angle

14 What will happen when the tool height is set below the centre of work piece?

A Decreases the rake angle

B Increases clearance angle

C Work gets damaged

D Poor finish

Jigs and Fixtures

Choose the correct answer

1 What is the advantage of using Jigs and fixture ?

A Setting time more

B Marking and layout required

C Skilled person required for setting

D Easy to use even by an unskilled worker

2 Jigs are used to

A Hold and locate

B Hold support, locate and guide the tool

C Support and guide the tool

D Hold and guide the tool

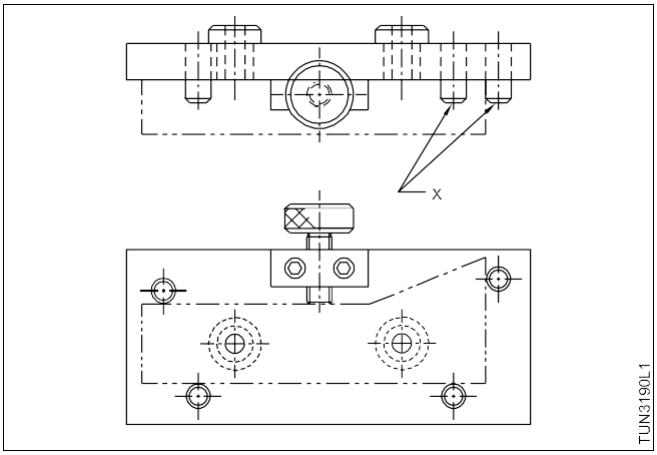
3 Name the part marked as 'X' in plate Jig

A Locating pin

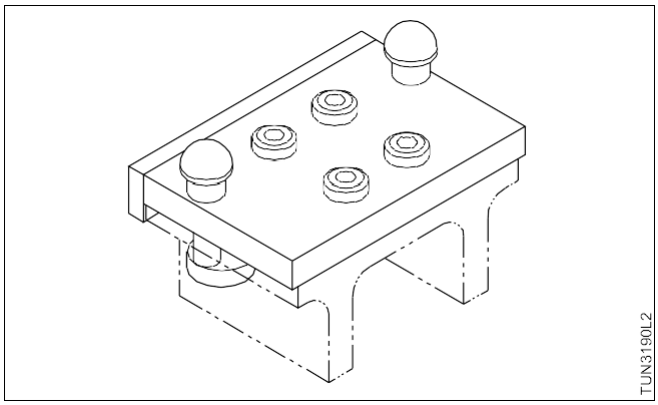
B Work piece

C Hook bolt

D Drill bushes



4 Name the types of jig shown in fig.



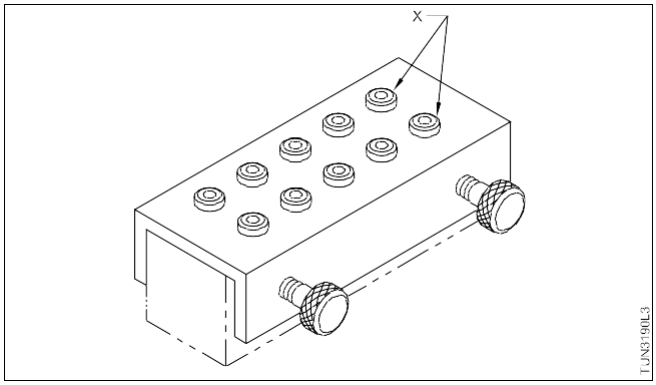
A Post jig

B Channel jig

C Solid jig

D Plate jig

5 Name the part marked as 'X' in shown fig ?



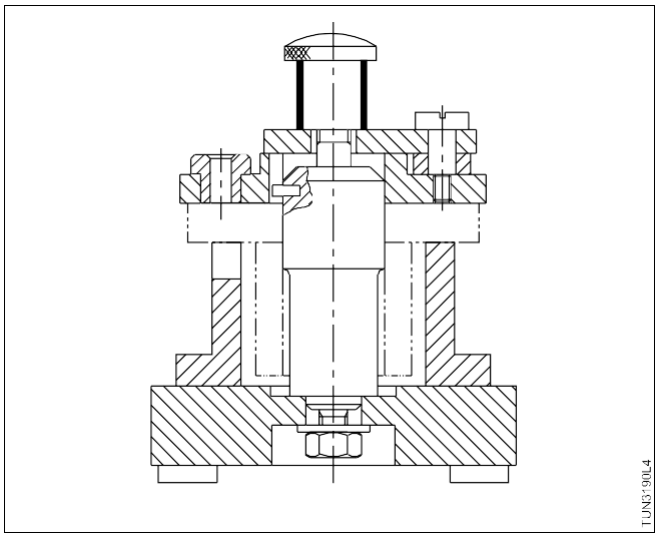
A Locating pin

B Drill bush

C Button clamp

D Base plate

6 Which type of jig is shown in fig.



A Table jig

B Sandwich jig

C Post jig

D Solid jig

7 What is the use of solid jig?

A Small jobs

B Heavy jobs

C Lengthy jobs

D Large thin sheet jobs

8 Which type of jigs are used to hold thin or soft work piece?

A Table jig

B Sandwich jig

C Post jig

D Solid jig

9 Which type of jig is used to drill in many direction on a simple job?

A Trunnion jig

B Latch jig

C Box jig

D Post jig

10 Which jig is used to drill awkward shaped work?

A Box jig

B Trunnion jig

C Plate jig

D Solid jig

11 Which type of jig provides easy loading and unloading?

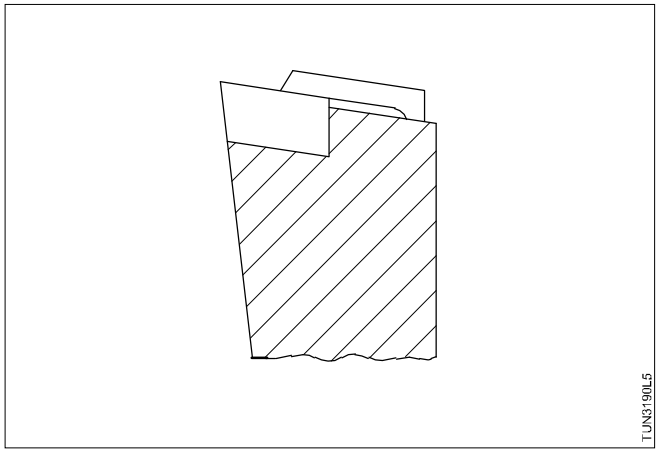
A Sandwich jig

B Channel jig

C Post jig

D Latch jig

12 Which type of chip breaker is shown in fig?



A Clamp type

B Groove type

C Step type

D Built up edge type

13 Purpose of chip breaker is used to

A Allow continuous chips

B Reduce the feed

C Preventing from work hazard

D Easy to machining

14 Which one is the mechanical type chip breaker ?

A Step type

B Groove type

C Clamp type

D Built up edge type

15 What is the necessity of chip breaker?

A Allow long curly chips

B Reduce cutting resistance

C Avoid friction form work

D Used for irregular work

Cutting tool material

Choose the correct answer

1 Ratio of carbon in high carbon steel is

A 0.5% to 1.5%

B 1.8% to 2.5%

C 0.9% to 1.5%

D 1.5% to 2.0%

2 Ratio of tungsten in high speed steel

A 15%

B 18%

C 17%

D 20%

3 Which tool material have high compressive strength ?

A Stellite

B Cemented carbide

C Coated carbide

D Ceramic

4 Which material is coated on carbide tools

A Tungsten

B Chromium

C Vanadium

D Titanium

5 Which material is used to cut glass...

A Cemented carbide

B Diamond

C Stellite

D Ceramic

6 Which material is used to make ceramic tool

A Zinc sulphate

B Copper iridium

C Aluminium oxide

D Tungsten oxide

7 Diamond tools stand with the temperature of...

A 2000°C

B 1650°C

C 1500°C

D 1400°C

8 In molibodinium high speed steel, the percentage of molibodinium is

A 2%

B 4%

C 6%

D 8%

9 In cobalt high speed the percentage of tungsten...

A 12%

B 2%

C 20%

D 4%

10 Which one of the properties will increase in cast alloy tool material?

A Red hardness

B Brittleness

C Wear resistance

D Toughness

11 Name the property of material by which it can cut other material...

A Cold hardness

B Red hardness

C Toughness

D Brittleness

12 Which property of material maintain cutting efficiency during machining?

A Cold hardness

B Red hardness

C Toughness

D Brittleness

13 Which property possessed by material to resist sudden load?

A Cold hardness

B Red hardness

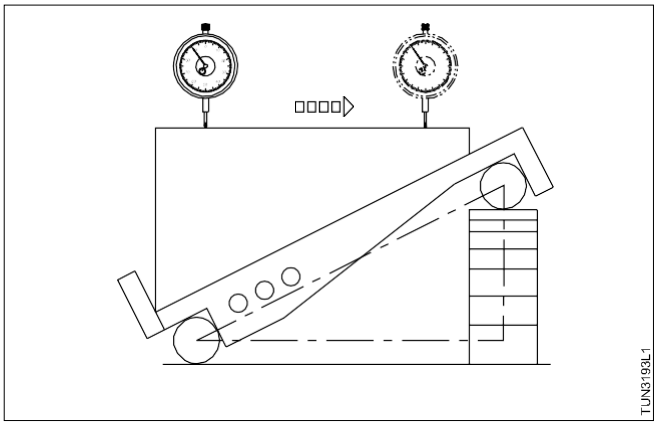
C Toughness

D Brittleness

Checking of taper with Sine Bar

Choose the correct answer

1 Find the angle of the work piece if the slip gauge height is 85.00mm and the size of the sine bar used is 200mm long



A 25°5'

B 25°7'

C 25°8'

D 25°9'

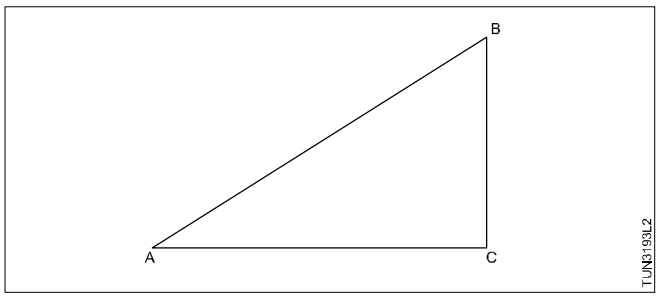
2 Determine the height of slip gauges for an angle of 25° using a Sine bar 200mm long

A 84mm

B 84.5mm

C 84.52

D 84.62mm



3 What will be checked with sine bar?

A Angles

B Length

C Diameter

D Radius

4 Sine bar length is designated based on...

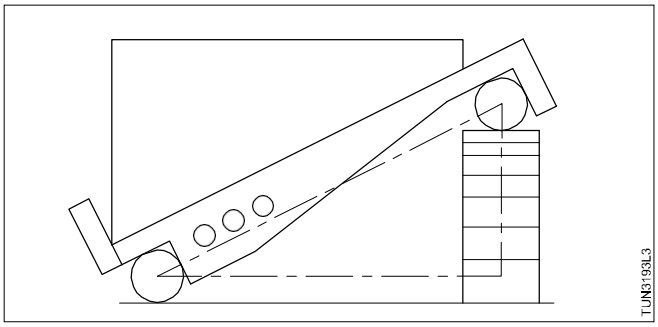
A Total length of sine bar

B Between two roller centre point

C Between two roller outer end

D Between two roller Inner end

5 Find the angle of the work piece if the slip gauges height is 17.36 mm and the size of the sinebar used is100mm long



A 9°

B 10°

C 11°

D 12°

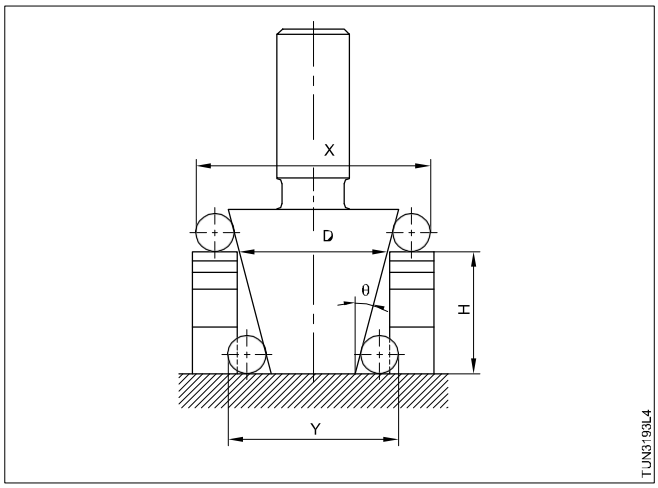
6 Which one of the following is the correct formula

A $\text{Tan}\,\theta = \dfrac{X+Y}{2H}$

B $\text{Tan}\,\dfrac{\theta}{2} = \dfrac{X+Y}{H}$

C $\text{Tan}\,2\,\theta = \dfrac{2(X-Y)}{2H}$

D $\text{Tan}\,\theta = \dfrac{X-Y}{2H}$



7 Formula for determining the large diameter of taper at any desired height is

A H = Y + 2 (S+r)

B H = Y - 2 (S+r)

C H = X - 2 (S+r)

D H = X + 2 (S-r)

8 Which formula is used to determine the small end diameter, using rollers?

A d = y+2 (s-r)

B d = y- 2 (s+r)

C d = x-2 (s+r)

D d = x+2(s-r)

9 What is the formula, using rollers to calculate the major dia of taper?

A Y - 2 (s+r)

B T+ 2L x tanθ

C $\dfrac{(x-y)}{2H}$

D x+2 (s+r)

10 By determining the small end diameter using rollers the formula d=y-2 (s+r) is used, the 'S' means of

A Diameter over the two rollers

B Radius of the roller

C Distance from centre of roller to the end off component

D Major diameter of the taper

Cutting speed, feed, turning and depth of cut

Choose the correct answer

1 Factor governing the cutting speed is...

A Toolgeometry

B Diameter ofwork

C Type of cutting tool

D Skill the operator

2 Cutting speed of H.S.S for copper is...

A 30-35m/min

B 35-50m/min

C 50-80m/min

D 35-70m/min

3 The volume of metal removal is

A Cutting speed x feed x depth of cut

B Cutting speed x feed

C Feed x depth ofcut

D Cutting speed x depth of cut

4 What is unit to represent feed?

A Meter/Minute

B MM/ Revolution

C Meter/ Revolution

D Meter/ Second

5 Calculate the spindle speed to turn dia 40mm M.S rod using cemented carbide tool (recommended cutting speed of cemented carbide tool is -92m/min)

A 731.8 rpm

B 718.3 rpm

C 817.3 rpm

D 738.1 rpm

6 The formula for calculating machining time...

A $T = \frac{f \times n}{l \times n}$

B $T = \frac{l \times n}{f \times N}$

C $T = \frac{l \times N}{f \times n}$

D $T = \frac{f \times n}{l \times N}$

7 Calculate the dia of work using H.S.S tool the cutting speed recommended is 30m/min and the rpm is 238.5

A φ 32 mm

B φ 36 mm

C φ 40 mm

D φ 45 mm

8 tools are classified by the letters of 'S' 'P' and 'U'.The letter 'S' means of...

A Basic shape

B Clearance angle

C Tolerance class

D Insertthickness

9 The specialty of tool holder for holding throw away tips are

A They have fixed angles

B Accommodate different shaped inserts chip

breaker C They do not have chip breaker

D They are made out of ordinary steel

10 The special factors need to be considered while using carbide throw away insert are..?

A Select any tool post

B Tool can be set at the centre of axis with out over hang

C Constant speed need not be used

D Tool can be set any axis with over hang

11 Throw away tip tool clearance angle classified by the letter of

A S

B P

C U

D W

12 Throw away tip tool tolerance class classified by the letter of

A S

B P

C U

D W

13 The clearance angle of a throw away tip specified by letter ‘C’ angle of...

A 5°

B 7°

C 12°

D 20°

14 The basic shape of throw away tip tool classified by the letter ‘L’ shape of

A Square

B Round

C Rectangular

D Triangular

15 The characteristic of throw away tip tools are specified by the letter

A S

B P

C U

D N

16 What does the letter ‘N’ the throw away tip tool related to direction of cutting

A Right hand cutting

B Left hand cutting

C Right and left hand cutting

D Nose radius

17 Designation for carbide inserts shown in fig the block 12 is an indication of...?

S	P	U	N	12	03	08

A Thickness of tool

B Nose radius

C Clearance angle

D Size cutting edge

18 Designation for carbide inserts shown in fig the block 03 indicates

S	P	U	N	12	03	08

A Thickness of tool

B Nose radius

C Clearance

D Tolerance clan

19 For particular material using carbide tool finishing cutting speed of 900 rpm is given, identify the material.

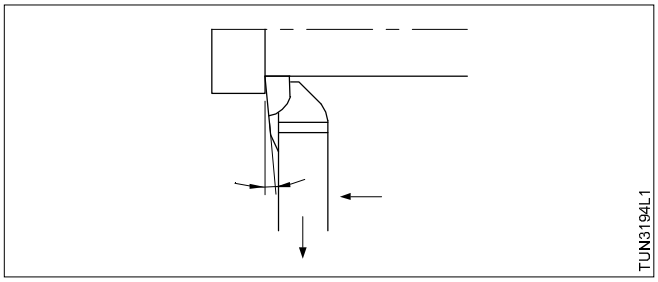
A Low carbon steel

B Medium carbon steel

C Brass and bronze

D Soft grey cast iron

20 Name the type of carbide tool



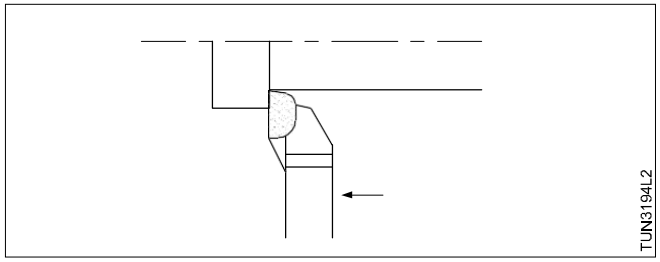
A ISO 2 cranked turning tool

B ISO 3 offset facing tool

C ISO 5 offset turning and facing tool

D ISO 6 offset side cutting tool

21 Name the type of carbide tool.



A ISO 2 cranked turning tool

B ISO 3 offset facing tool

C ISO 5 offset turning and facing tool

D ISO 6 offset side cutting tool

22 ISO carbide tool manufacturer’s referring the carbide tool by shown figure the second block mean as

ISO 1	R	25q	DIN 4971	P	30

A Shape - 1 - 9

B Size and shape of spindle

C Rough / Finish

D Carbide grade

23 ISO carbide tool manufacture's designation is shown below. The fifth block indicates...?

ISO 1	R	25q	DIN 4971	P	30

A Shape 1 - 9

B Size and shape of shank

C Rough / Finish

D Carbide grade

24 The classification off carbide tip tools can be identified by colors and alphabets. The letter 'P' refers to

A Blue

B Red

C Yellow

D Green

25 The classification of carbide tip tools can be identified by colors and alphabets. The letter 'M' refers

A Blue

B Red

C Yellow

D Green

26 The classification of carbide tip tool identified by colors and alphabets. The letter 'K' refers

A Blue

B Red

C Yellow

D Green

27 Corner boring tool with carbide tip comes under which category

A ISO 3

B ISO 7

C ISO 9

D ISO 5

Face plate & Angle plate

Choose the correct answer

1 An angular work piece is to be faced, which device is suitable for mounting?

A 3 Jaw chuck

B Collet chuck

C Driver plate

D Face plate

2 What is the purpose of 'T' slots or elongated holes in a face plate?

A Placing clamps and bolts

B Placing on machine spindle

C Placing on work piece

D Guide the cutting tool

3 During machining operation using face plate how is the angle plate held?

A Face plate

B Carriage

C Tail stock

D Bed

4 When machining irregular shaped work piece counter weight are fastened on face plate, what is the purpose?

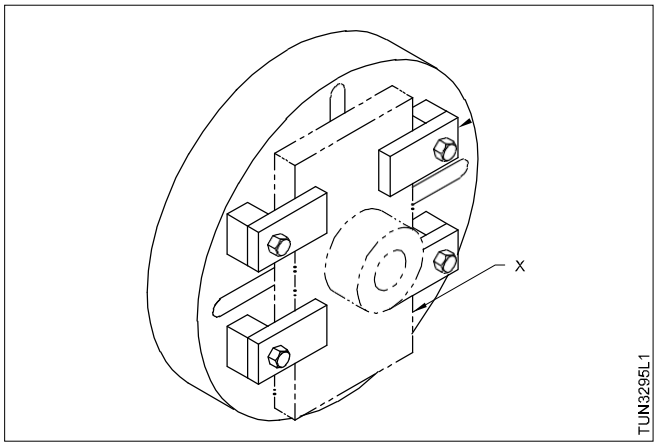
A Mount the work

B Balancing the rotation

C Support the work

D Mount the accessories

5 Name the part marked as 'X' in the figure shown



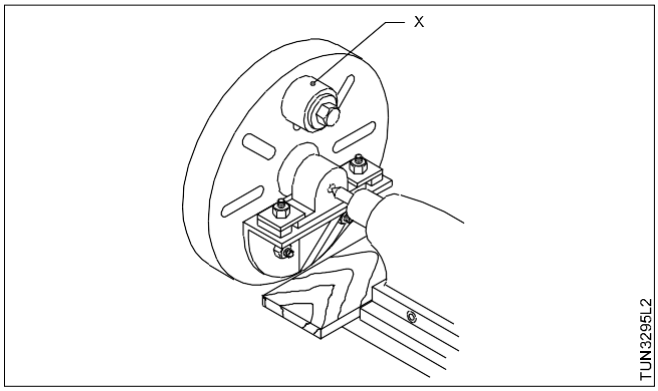
A Clamp

B Face plate

C Work piece

D Counter weight

6 Name the part indicated mark 'X' show in fig?



A Face plate

B Work plate

C Angle plate

D Counter plate

7 When machining an irregular shaped work piece held in face plate, counter balancing is done by clamping weights, this is done...

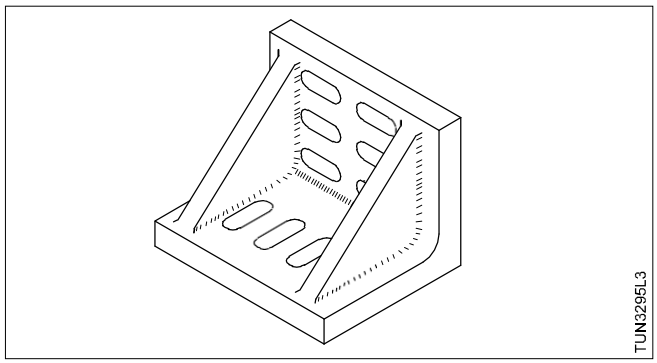
A Before mounting the face plate on the spindle nose.

B After mounting the face plate on the spindle nose and revolving the plate

C Work piece at the slowest rpm

D After mounting the face plate on the spindle nose and keeping the spindle in neutral position

8 Name the type of angle plate shown in fig



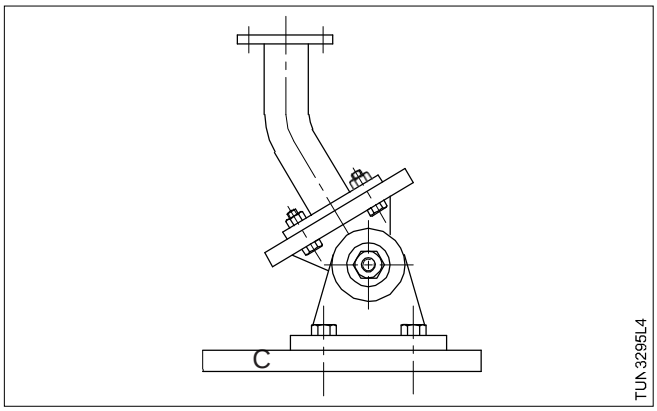
A Swivel type angle plate

B Box type angle plate

C Slotted type angle plate

D Plain solid type angle plate

9 Name the types of angle plate shown in fig



A Swivel type angle plate

B Box type angle plate

C Slotted type angle plate

D Plain solid type angle plate

10 Angle plates have two plane surfaces machined perfectly flat, what is the angle between the surface?

A Acute angles

B Obtuse angles

C Right angles

D Parallel to each other

11 Angle plates are made out of...

A Cast iron

B Grey cast iron

C Closely grain cast iron

D Wrought iron

12 The angle plates are grouped into

A Two grades

B Three grades

C Four grades

D Five grades

13 The angle plates have ribs on the unmachined parts to

A Handle easily

B Good rigidity

C Good appearance

D Support the work

14 Angle plates sizes are specified by the

A Size

B Weight

Size and grade

D Grade

15 Angle plates are available in different sizes. how are the sizes indicated?

A Numbers

B Symbols

C Letters

D Grades

16 Which grade angle plate used in tool room work?

A Grade 1

B Grade 2

C Grade 0

D Grade 00

17 In face plate necessity of balancing the work is

A To hold the work accurately

B To hold the work with rigidity

C To eliminate vibration on work

D To give lesser gravity

18 The counter weight mounted on face plate with the

A Opposite side of work

B Near the work

C Top side of work

D Bottom side of work

Surface finish symbol used on working blue print

Choose the correct answer

1 The movement of cutting tool leaves certain lines or pattern on the work surface known as...

A Surface finish

B Surface texture

C Surface number

D Roughness grade

2 The irregularities in the surface texture result from the inherent action of the production process is known as

A Primary texture

B Secondary texture

C Profile

D Direction of lay

3 The component of the surface texture upon which roughness in super imposed known as

A Roughness

B Waviness

C Surface texture

D Roughness grade

4 The surface texture quality expressed and assessed by

A Letter

B Symbol

C Numerically

D Profile

5 'Ra' value expressed in terms of

A Micron

B Millimeter

C Centimeter

D Meter

6 The maximum permissible value of surface roughness in known as

A Profile

B Texture

C Waviness

D 'Ra' value

7 The surface texture quality numerically is by using 'Ra' value is

A 0.001mm

B 0.0001mm

C 0.00001inch

D 0.000001 inch

8 The roughness grade number ranging from

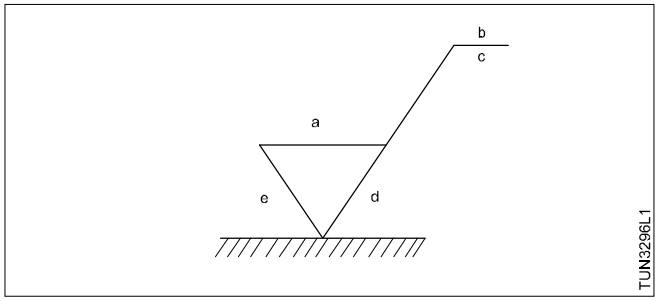
A N_1 to N10

B N_1 to N11

C N_1 to N12

D N_1 to N13

9 The method of producing surface indicated in surface finish symbol. Which of the specification on surface finish refer the method of production in the symbol shown



A Letter 'a'

B Letter 'b'

C Letter 'c'

D Letter 'd'

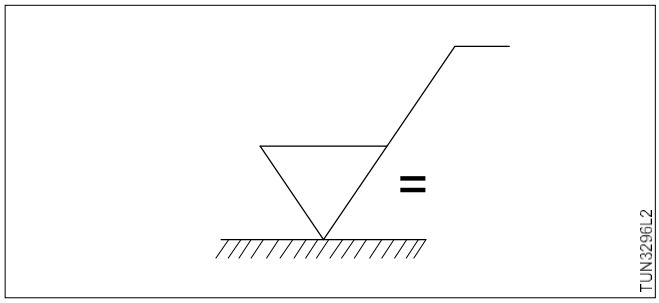
10 The surface roughness is indicated by the symbol as per BIS system. What does the symbol indicates of?

A Parallel to the surface

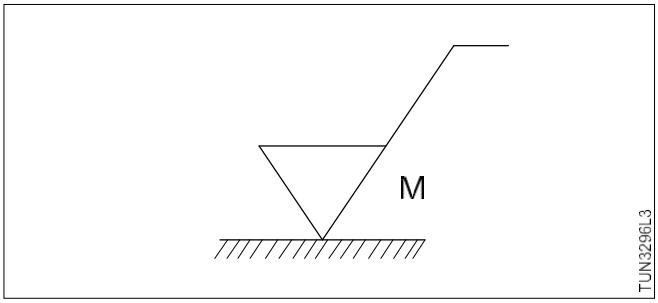
B Perpendicular to the surface

C Multi direction

D Circular relative to the centre



11 The surface roughness is indicated by the symbol as per BIS system. What does the symbol indicates ?



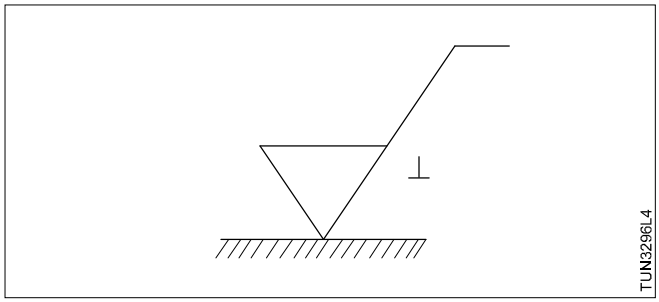
A Parallel to the surface

B Perpendicular to the surface

C Multi directional

D Circular relative to the centre of work

12 Surface roughness indicated by the symbol as per BIS system. What does the symbol indicates?



A Parallel to the surface

B Perpendicular to the surface

C Multi directional

D Circular relative to the centre of work

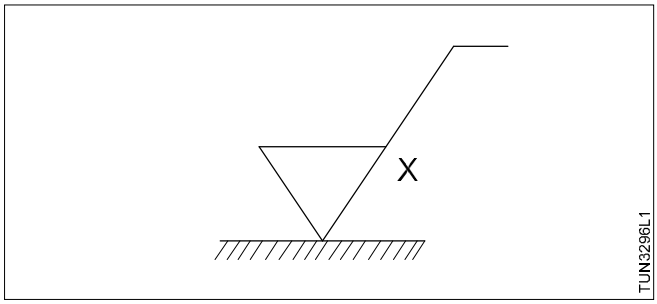
13 The surface roughness is indicated by the symbol as per BIS system. What does the symbol indicate ?

A Multi directional

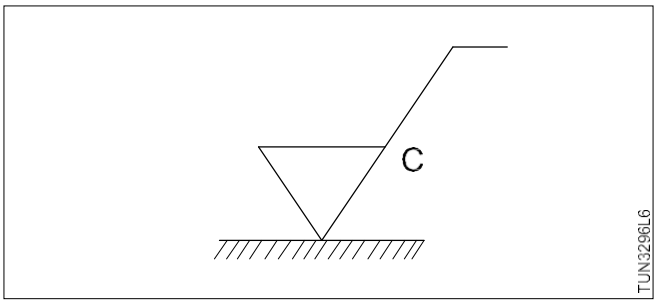
B Circular relative to the centre of work

C Angular both direction

D Perpendicular to the surface



14 The surface roughness indicated by the symbol as per BIS system . What does the symbol indicate?



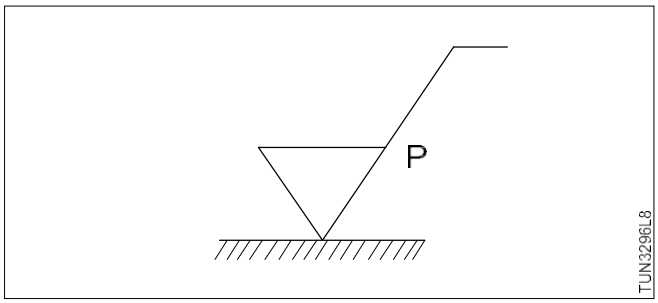
A Parallel to the surface

B Radial relative to the centre of work

C Circular relative to the centre of work

D Angular both direction

15 The surface roughness is indicated by the symbol as per BIS system. what does the symbol indicate?



A Non- Directional

B Multi directional

C Angular both direction

D Perpendicular to the surface

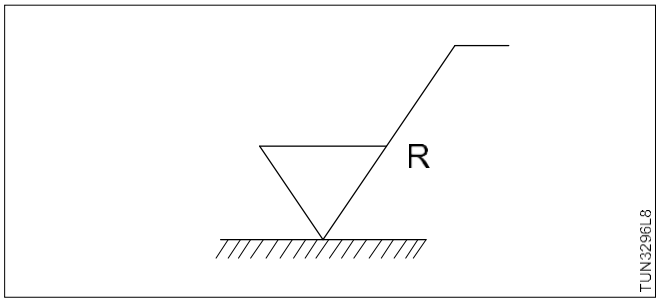
16 What does the symbol shown in fig indicates in roughness measurement?

A Parallel to the surface

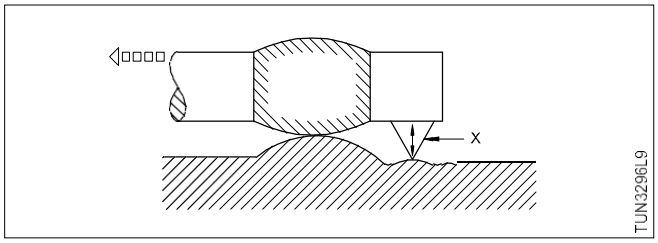
B Radial relative to the centre of work

C Circular relative to the centre of work

D Angular both direction



17 Name the part 'X' marked as in the mechanical surface indicator



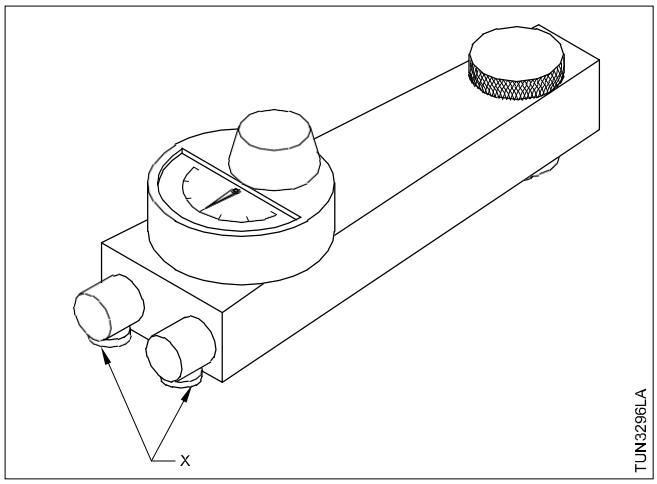
A Diamond stylus

B Indicator scale

C Slid

D Skid

18 Name the part 'X' marked as in the mechanical surface indicator



A Stylus

B Indicator scale

C Slid

D Skid

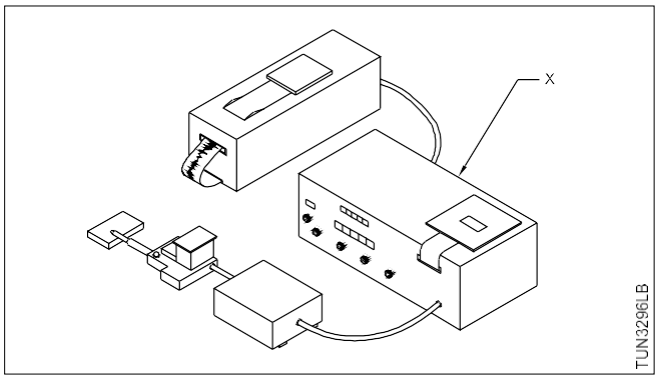
19 Name the part 'X' marked as in the electronic surface indicator

A Recorder

B Amplifier

C Motor

D Stylus



20 In a electronic surface indicator which part helps to analyze the electrical signals?

A Recorder

B Amplifier

C Stylus

D Motor

21 In electronic surface indicator. Which part control the movement of the instrument head?

A Stylus and motor

B Stylus and recorder

C Stylus and amplifier

D Motor and amplifier

22 What does the symbol  indicate in surface roughness process?

A Filing

B Turning

C Grinding

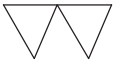
D Honing

23 Which surface roughness symbol shown indicate the finest surface?

A 

B

C

D 

24 Roughness grade number N5 in the manufacturing process is...

A Shaping

B Turning

C Cylindrical grinding

D Super finishing

25 Roughness grade number N2 in the manufacturing process is

A Lapping

B Grinding

C Filing

D Hacksaw cutting

26 Roughness grade number N12 in the manufacturing process is

A Planning

B Hacksaw cutting

C Drilling

D Cylindrical grinding

27 What is Ra value for N7 grade?

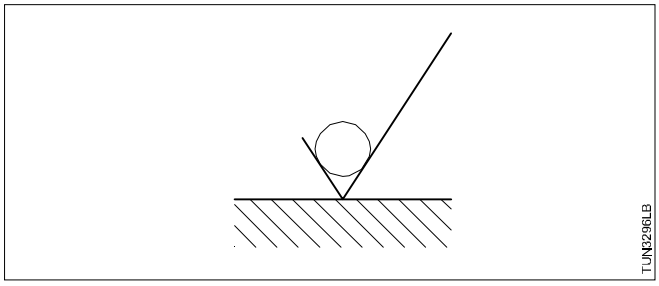
A 6.3 microns

B 3.2 microns

C 1.6 microns

D 0.8 microns

28 What does the symbol indicates, on the method of production in surface roughness?



A Metal removal by machining

B Metal removal not permitted

C Removal of material by material

D Removal of material by grinding

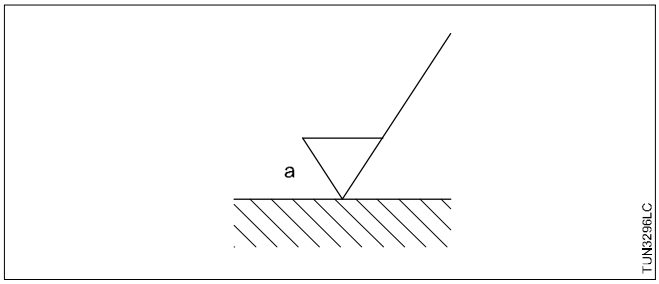
29 The surface roughness indicated shows special characteristics. What does the symbol indicates in fig shown

A Sampling length

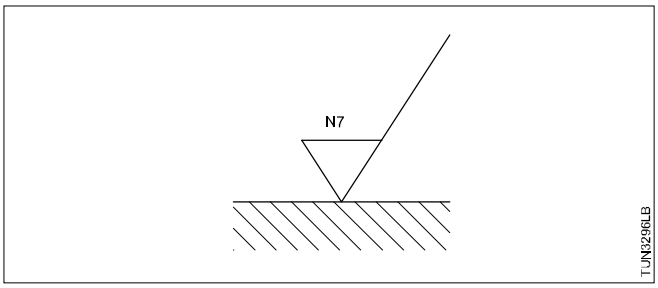
B Allowance in mm

C Production method

D Surface treatment or coating



30 What is the roughness value of the symbol shown in fig



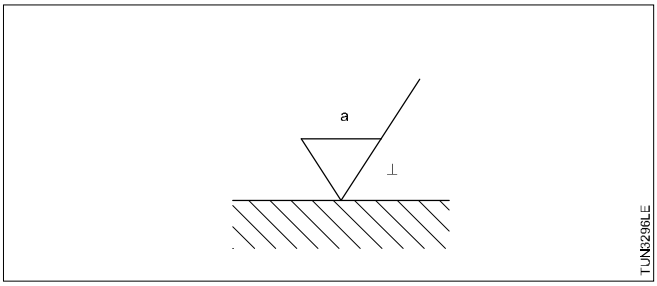
A 0.8

B 1.6

C 3.2

D 6.3

31 The surface roughness symbol indicates certain characteristics. What does the symbol indicates in the in fig



A Indication of allowance

B Indication of sampling

C Indication of surface treatment

D Indication of surface pattern by production method

32 Which material is used for lapping work?

A Nickel

B Chromium

C Copper

D Gun metal

33 Which material is commonly used for lapping holes ?

A Brass

B Bronze

C Tin

D Lead

34 Which one of the abrasive is used to remove heavy material?

A Boron carbide

B Silicon carbide

C Aluminium oxide

D Diamond

35 Which one of the lapping abrasive used to lap soft steel and non- ferrous metal?

A Fused alumina

B Silicon carbide

C Boron carbide

D Diamond

36 Which one of the abrasive is most suitable for lapping dies and gauges?

A Silicon carbide

B Boron carbide

C Diamond

D Aluminium oxide

37 Which one of the following abrasive is used for honing tungsten carbide?

A Aluminium oxide

B Silicon carbide

C Diamond

D Boron carbide

38 Which one of the lapping vehicles regulate the cutting action and lubricate the lapping surface?

A Vegetable oil

B Kerosene

C Petrol

D Diesel

39 Which one of the lapping vehicle is used to lap copper and its alloy?

A Machine oil

B Soluble oil

C Grease

D Petrol

40 Hand lapping plates are made out of...

A Cast steel

B Wrought iron

C Closed grey cast iron

D Non- ferrous metal

41 Before commencing lapping of the component the cast iron plate is applied with abrasive particle is known as

A Coated

B Filled

C Deposited

D Charging

42 Honing operation is done by...

A Combined vertical and Horizontal motion

B Combined rotary and reciprocating motion

C Vertical motion

D Horizontal motion

43 Honing is one of the...

A Boring process

B Reaming process

C Finishing process

D Drilling process

44 Which among the following process is employed for embedding the abrasive on the lap?

A Lapping

B Fixing

C Charging

D Rubbing

45 Which are the important parameter that effects the material removal rate (MRR)?

A Unit pressure, peripheral speed, time

B Length of honing stick

C Rotational speed

D Oscillation speed

46 What material is the stylus of a mechanical surface finish indicator made up of ?

A Brass

B Bronze

C Steel

D Diamond

Preventive Maintenance

Choose the correct answer

1 What are the basic activities of preventive maintenance? A Periodic inspection of material

B Repair or replace the parts

C Maintenance after break down

D Keeping the machines and equipment clean

2 The expansion of PM in work shop.

A Production method

B Production maintenance

C Production Manager

D Preventive maintenance

3 What is the main advantage of preventive maintenance? A Reduce major and repetitive repair of machine

B Increase major and repetitive repair of machine

C Production time is more

D Lesser quantity or Quality of the product

4 The frequency of inspection depends?

A The age and kind of the machine and its operating condition

B Servicing and over hauling in periodic internal

C Keeping the machine and equipment repaired at initial stage

D Helps in the reduction of unexpected break down

5 Which one is helps to analyze the machine and equipment?

A Frequent inspection

B Frequent lubrication

C Maintenance record analysis D

Wiping and cleaning of machine

6 Frequency of lubrication leads to...

A Increase major and repetitive repairs of machine

B Machine retain its accuracy and service satisfaction

C Decrease the quality and quantity of product

D Frequent break down increase

7 The expansion of TPM is

A Tyre Pressure Monitoring

B Transfer Price Mechanism

C Total Production Maintenance

D Trusted Platform Module

8 Which one represents the total quality management?

A Produce high batch quantity in early time

B Zero defect or elimination of poor quality production

C Minimum wastage in economic environment

D Producing goods with reducing product quality

9 Similarities of total quality management and total productive maintenance

A Employees must be empowered to initiate corrective action

B Producing goods with out reducing product quantities

C Production cost is more

D People could not involve with organization

10 What are the advantage of ?

A Producing goods with reduced product quality

B People involvement is lesser level in organization

C Attitude of the operator may not change

D Low batch quantity production in earliest possible time

11 What the direct benefit of the total productive maintenance is?

A Reduce accident

B Reduce productivity

C Avoid customer complaints

D Plant efficiency decrease

12 Which of the following provide reference during marking?

A Surface gauge

B Marking off table surface

C Work piece

D Scriber

13 The marking table is made out of ...

A Cast iron

B Cast steel

C Steel

D Wrought iron

14 Marking table is used for setting

A Face plate

B Catch plate

C Measuring instruments

D 4 Jaw chuck

15 Marking table should be cleaned with a

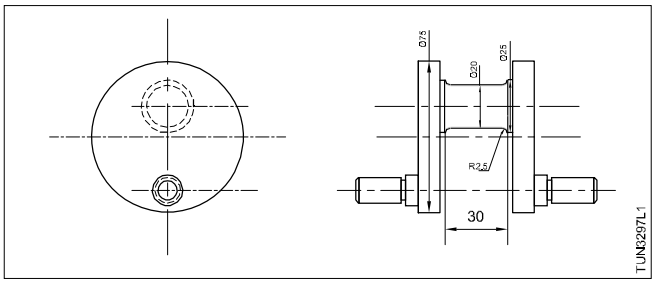
A Wire brush

B Brush

C Cotton waste

D Soft cloth

16 The crank pin of the single throw eccentric shaft as shown in fig is to be turned. What is the thumb value for determining the cutting speed for rough turning the eccentric



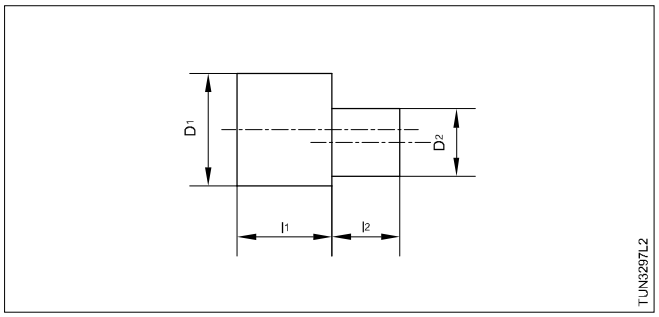
A The cutting speed same as of φ 75mm

B Three forth the cutting speed of φ 75mm

C Half the cutting speed of φ 75mm

D One third the cutting speed of φ 75mm

17 Fig shows an eccentric step of D2 turned for a length of l_2. The eccentricity will be equal to



A $\frac{(D_1 - D_2) \times L_1}{L_2}$

B $\frac{(D_1 - D_2) \times L_2}{L_2}$

C $\frac{(D_1 - D_2)}{2}$

D $\frac{(D_1 - D_2)}{2}$

18 When different diameter are turned with different axis which is known as?

A Plain turning

B Step turning

C Concentric turning

D Eccentric turning

19 When different diameter are turned with the same axis it is known as

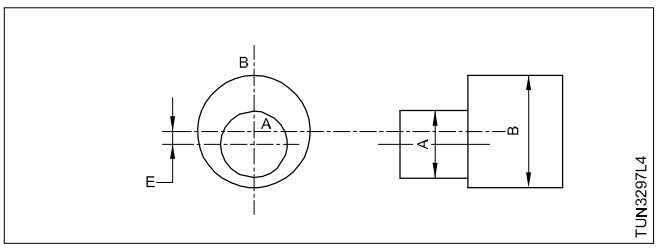
A Plain turning

B Taper turning

C Concentric turning

D Eccentric turning

20 Name the method of turning the job shown in figure



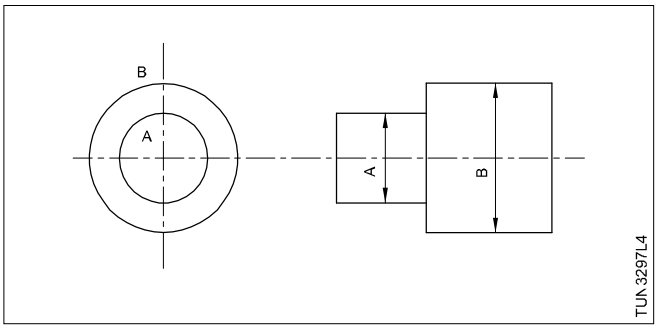
A Plain turning

B Taper turning

C Concentric turning

D Eccentric turning

21 Name the method of turning shown in the figure



A Plain turning

B Eccentric turning

C Concentric turning

D Taper turning

22 Where is an eccentric turned job is used?

A Power press

B Screw press

C Fly press

D Rake and pinion press

23 Eccentric turned jobs are largely used in automobile to convert rotary motion into...

A Linear motion

B Oscillating motion

C Rotary motion

D Reciprocating motion

24 Which line is marked with the help of marking tools in eccentric turning by using a lathe carrier and centers?

A Centre line

B Datum line

C Guide line

D Off set

25 In eccentric turning difference in the maximum and minimum reading of the dial test indicator is called...

A Step dia

B Throw

C Tolerance

D Cam

Roller & revolving study

Choose the correct answer

1 Which one helps to support long slender work piece?

A Travelling steady

B Fixed steady

C Cat head

D Live and dead centers

2 Where is the fixed steady rest fixed?

A Lathe carriage

B Lathe spindle

C Lathe bed

D Lathe saddle

3 The fixed steady has to support the work with the help of...

A One adjusting pad

B Two adjusting pads

C Three adjusting pads

D Four adjusting pads

4 In what way, the fixed steady rest helps in supporting the job?

A Continuous to the entire length of work

B Continuous at the fixed place of work

C Continuous to the boring tool during boring

D Continuous to the drill bit during drilling

5 In fixed steady rest the three adjusting pads are adjusted by...

A Adjusting screw

B Cam and cam lock

C Tension spring

D Automatically

6 The another name of travelling steady is...

A Fixed steady

B Follower steady

C Cat head

D Line and dead centre

7 The follower steady helps to support

A Continuous to the face of work

B Continuous to the entire length of boring tool

C Continuous to the entire length of work

D Continuous to the entire length of drill bit

8 Which one helps to support long square shaped rod during turning

A Fixed steady

B Follower steady

C Line and dead centre

D Cat head

9 Which one help to support the work using cat head?

A Travelling steady

B Lathe carrier

C Fixed steady

D Line and dead centre

10 Which steady has wheels on the place of three jaws

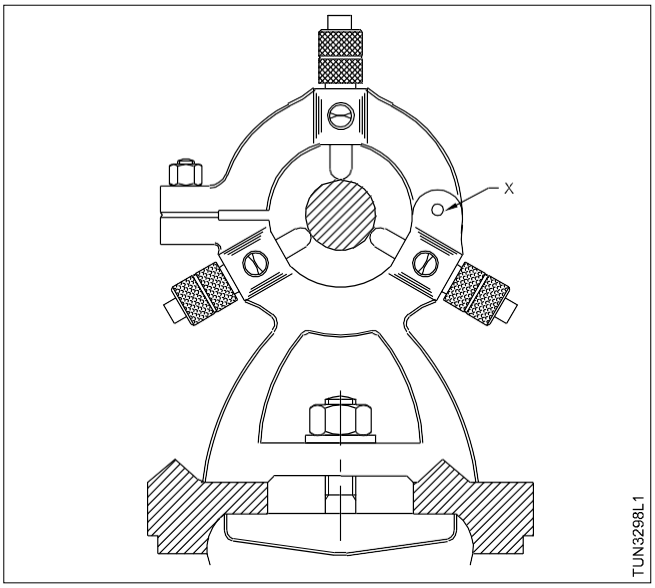
A Travelling steady

B Fixed steady

C Cat head

D Roller steady

11 Name the part marked as 'X' in the figure shown



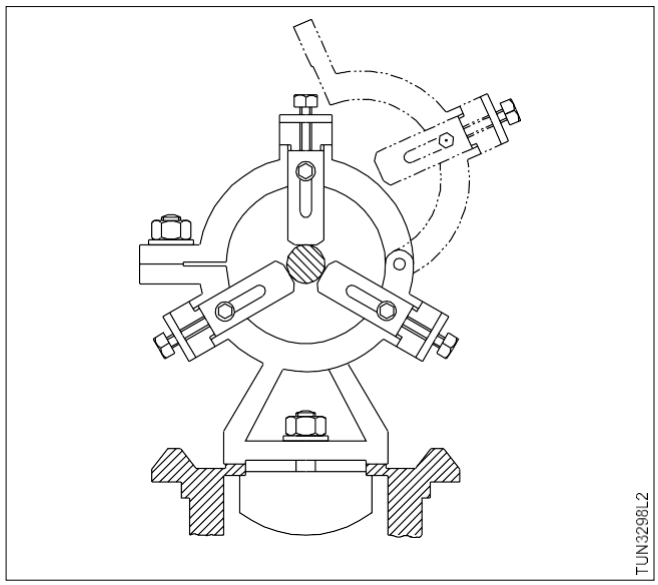
A Adjusting pad

B Hinge

C Bearing pad lock screw

D Base

12 Name the lathe accessory shown in figure



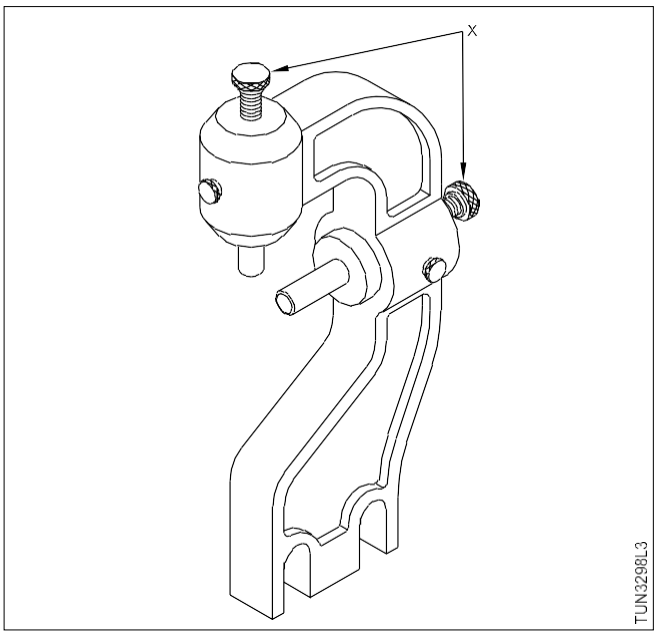
A Travelling steady

B Fixed steady

C Cat head

D Roller steady

13 Name the part marked as 'X' in the figure shown



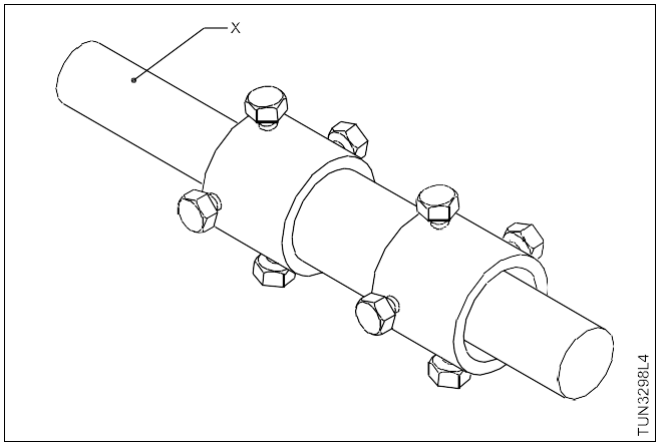
A Locking screw

B Frame

C Adjusting screw

D Bearing pad

14 Name the lathe accessory shown in figure



A Travelling steady

B Fixed steady

C Roller steady

D Cat head

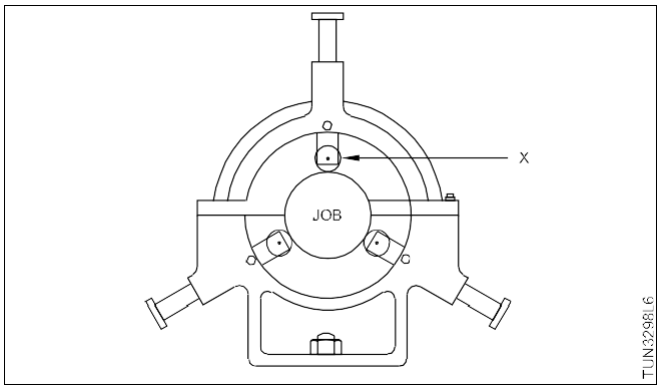
15 Name the type of steady rest shown in figure

A Travelling steady

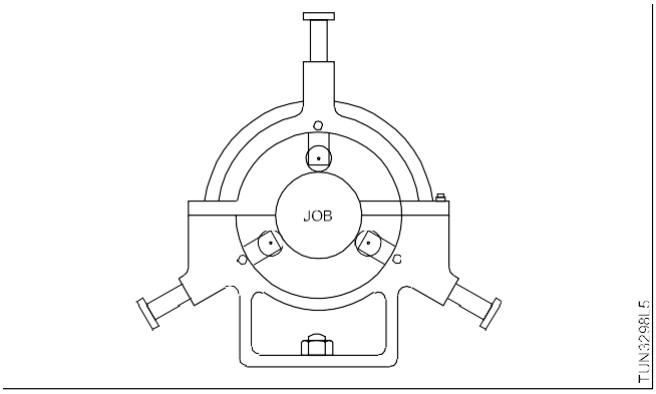
B Fixed steady

C Roller steady

D Cat head



16 Name the part marked 'X' in figure shown



A Locking screw

B Adjusting screw

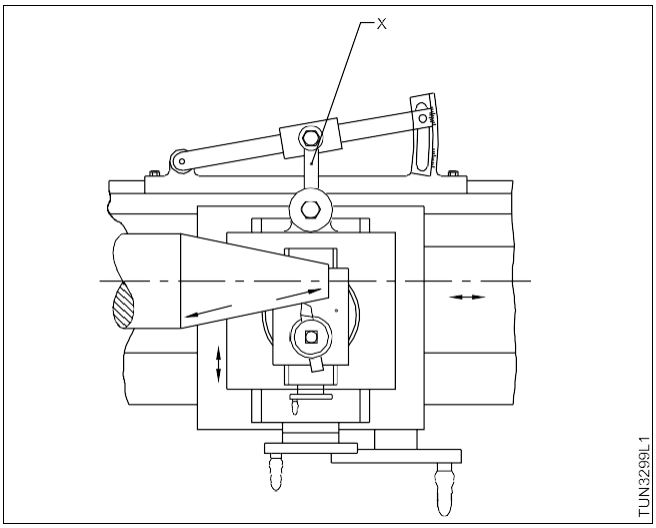
C bearing pad

D Roller

Different types of attachments

Choose the correct answer

1 Name the part marked as 'X' in the figure shown



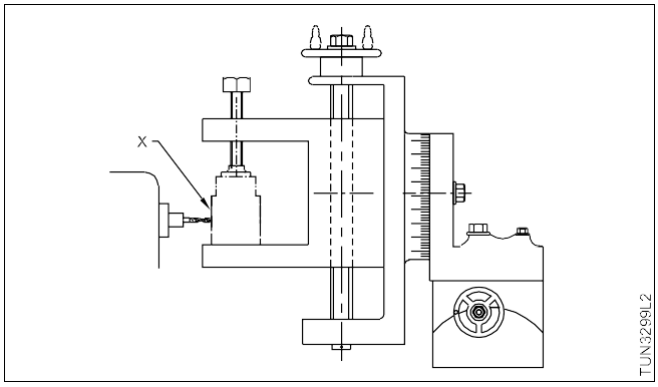
A Sliding block

B Guide bar

C Scale of degree

D Adjusting screw

2 Name the part marked 'as X' in figure shown



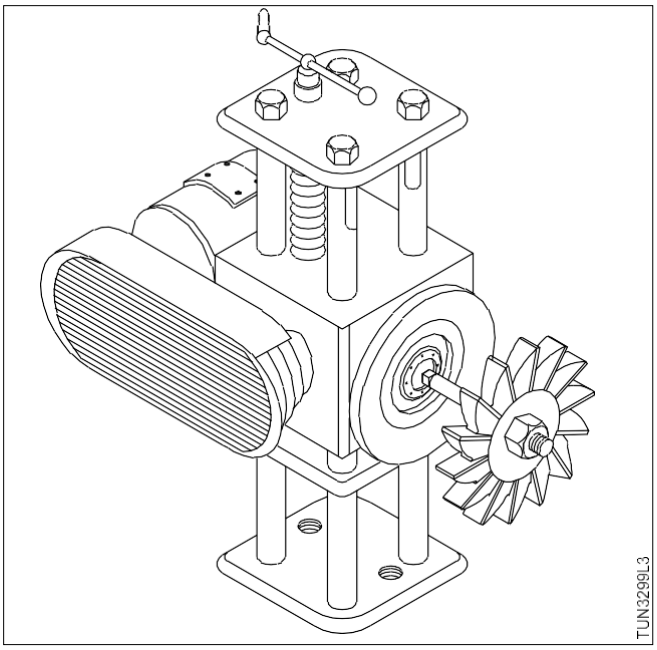
A Pad

B Job

C Head stock

D End mill

3 the type of attachment shown in figure



A Taper turning attachment

B Grinding attachment

C Milling attachment

D Relieving attachment

4 among the part used to apply depth of cut in taper turning attachment?

A Cross slide

B Carriage

C Top slide

D Saddle

5 h one helps to produce taper using taper turning attachment ?

A Cross slide

B Saddle

C Apron

D Top slide

6 h degree is the limitation to obtain taper by attachment method ?

A 8°

B 10°

C 12°

D 15°

7 When grinding metal gets embedded in the periphery of the wheel, the wheel must be dressed by the...

A Diamond dresser

B Abrasive wheel

C Oil stone

D Grinding stick

8 What should be the direction of rotation of work & grinding wheel while using a grinding attachment in a lathe?

A l and work rotate same direction

B l and work rotate opposite direction C

Wheel rotate when the work in stable

D Work rotate when the wheel in stable

9 Sharpening the reamers and cutters with tooth rest slightly below centre leaving a land is

A 0.5 to 0.15 mm

B 0.5 to 0.125 mm

C 0.05 to 0.125 mm

D 0.125 to 0.5 mm

10 Which part used to mount the spherical turning attachment?

A Tool post

B Top slide

C Cross slide

D Saddle

11 Which system is utilized in copying attachment?

A Bevel gear

B Worm and worm wheel system

C Pneumatic system

D Hydraulic system

12 Which one of the part control the tool movement in copying attachment

A Stylus

B Master profile

C Cross slide

D Compound slide

13 Copying attachment is used to

A Production shop

B Tool room shop

C Maintenanace shop

D General work shop

14 Copying attachment is used for

A Thread cutting

B Taper turning

C Form turning

D Eccentric turning

15 Which one guide the stylus in copying attachment

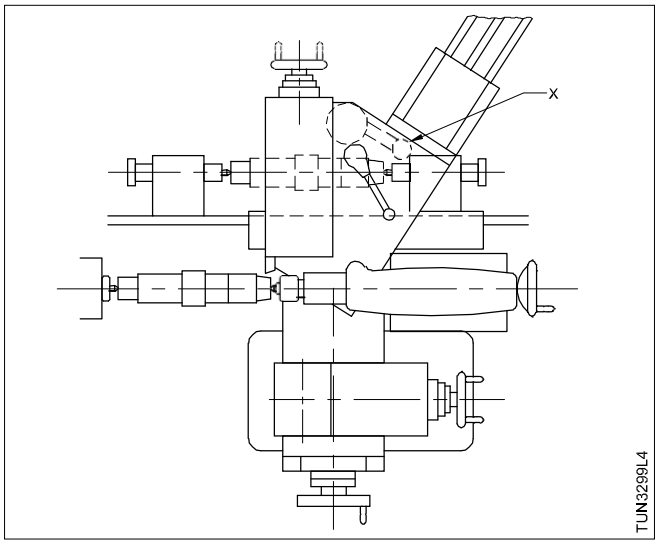
A Work piece

B Master piece

C Guide bar

D Guide block

16 Name the part marked in 'X' show in figure



A Rear tool slide

B Master profile

C Running profile

D Stylus

Various Procedures of thread measurement

Choose the correct answer

1 Which gauge is used to check the pitch of external and internal threads?

A Screw pitch gauge

B Thread ring gauge

C Thread caliper gauge

D Thread plug gauge

2 Thread plug gauge is used to check the...

A External 'V' thread

B Internal thread

C Internal square thread

D Internal worm thread

3 Thread ring gauge is used to check the...

A External thread

B Internal thread

C Internal diameter

D External diameter

4 Which gauge is having two set of anvils...

A Screw pitch gauge

B Thread plug gauge

C Thread ring gauge

D Thread caliper gauge

5 Which gauge is used to check the right hand and left thread?

A Screw pitch gauge

B Thread caliper gauge

C Thread plug gauge

D Thread ring gauge

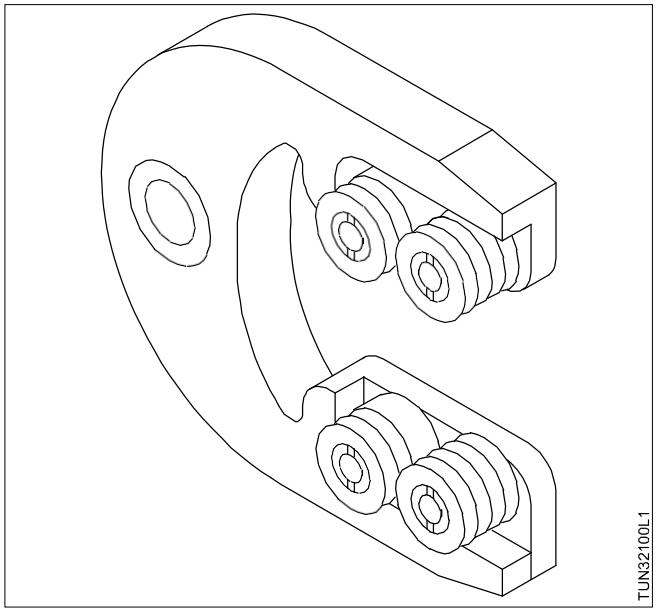
6 Name the type of screw gauge shown in figure'

A Thread plug gauge

B Thread ring gauge

C Thread caliper gauge

D Thread pitch gauge



7 Which measuring instrument is used to check the effective diameter of the screw thread

A Micrometer

B Gear tooth thread micrometer

C Thread micrometer

D Flange micrometer

8 Which element of a thread can be checked using thread micrometer?

A Pitch

B Major dia

C Minor dia

D Effective dia

9 Selection of wire depends on the

A Pitch of the thread

B Flank of the thread

C Crest of the thread

D Root of the thread

10 While measuring the screw thread, the two wires are fixed on the ...

A Spindle

B Anvil

C Barrel

D Thimble

11 Which part of thread can measure within the degree of accuracy using vernier caliper

A Major diameter

B Minor diameter

C Pitch of the thread

D Profile of the thread

12 Which dimension of a thread checked using vee prism

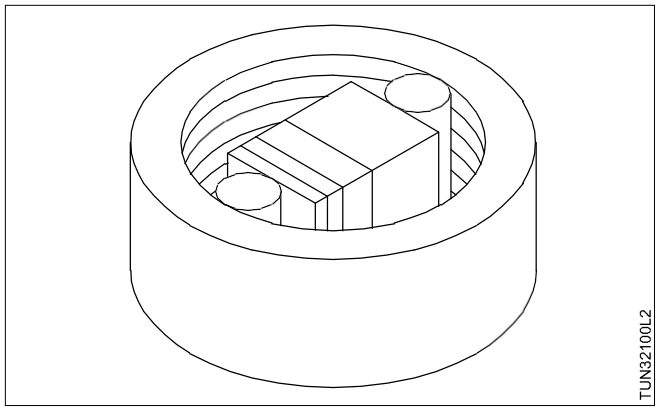
A Major diameter

B Minor diameter

C Flank of thread

D Profile of thread

13 Name the method of checking minor dia of internal thread shown in the figure ?



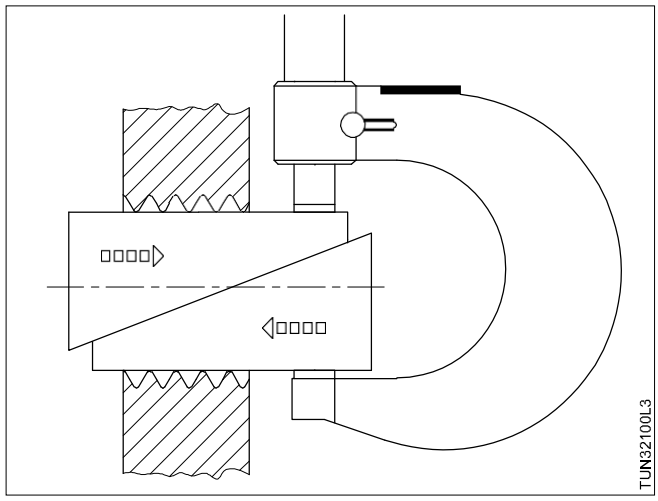
A Using vernier caliper

B Using taper parallel block

C Using slip gauge and precision roller

D Using vee prism

14 Name the method of checking minor dia of internal thread shown in figure



A Using vernier caliper

B Using taper parallel block

C Using slip gauge and precision roller

D Using Vee prism

15 Which method used to check the flank angle of a thread?

A Microscope

B Pitch gauge

C Optical projector

D Using special micrometer

16 Which material used to cast for checking flank angle of an internal thread?

A Clay

B White cement

C Plaster of Paris

D Wax

17 The accuracy of tool makers microscope is

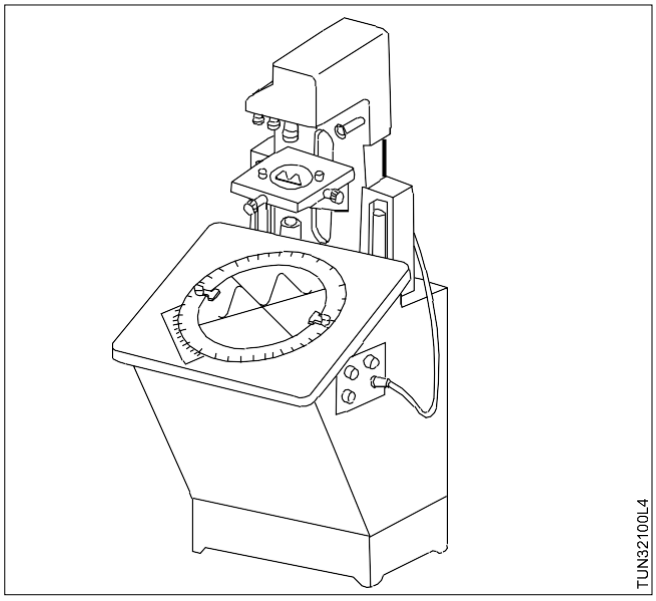
A 5 micron

B 10 micron

C 15 micron

D 25 micron

18 Name the instruments shown in the figure



A Special microscope

B Microscope

C Optical projector

D Tool makers microscope

19 Name the instrument in shown figure

A Special micrometer

B Microscope

C Optical projector

D Tool makers microscope

Tool maker's buttons

Choose the correct answer

1 Tool maker's button is used for...

A Drilling a hole with accuracy

B Trepanning a hole with accuracy

C Producing bore to position accuracy

D Reaming a hole with accuracy

2 Which material used to make tool maker's button?

A Steel

B Brass

C Bronze

D Copper

3 The selection of dia of material to make tool maker's button in

A 5,6 and 8mm

B 6,8 and 10 mm

C 10,12 and 16mm

D 8,10 and 12mm

4 Which screw is used to position the button on work piece?

A 4 BA

B 5 metric

C 3/16" BSW

D 4 BSF

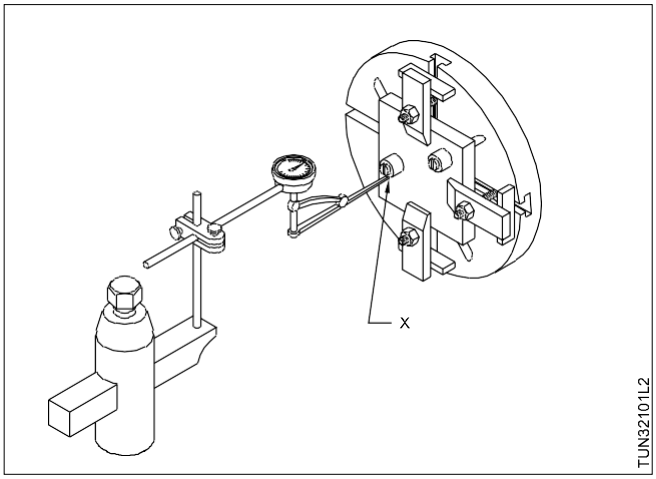
5 Name part marked as 'X' shown in figure

A Stylus

B Bolt and nut

C Clamp

D Tool maker button



6 Which device is used to mount the work when using tool maker's button?

A Face plate

B 3 jaw chuck

C Angle plate

D Drive plate

7 Which one helps to locate when position the work using tool maker button

A Clamp

B Bolt and nut

C Guide strip

D Tool maker button

Telescopic gauge construction, uses

Choose the correct answer

1 Telescopic gauges are used to check the...

A Step length

B Size of hole

C Width off key slot

D Angle of beveled surface

2 Telescopic gauge is one of the...

A Direct reading measuring instrument

B Indirect reading measuring instrument

C Template

D Bore gauge

3 Telescopic gauges are in...

A 'T' shaped

B 'L' shaped

C Square shaped

D Round shaped

4 Telescope gauges are available in a set of...

A 3 Nos

B 4 Nos

C 5 Nos

D 6 Nos

5 Telescope gauges can measure the holes from

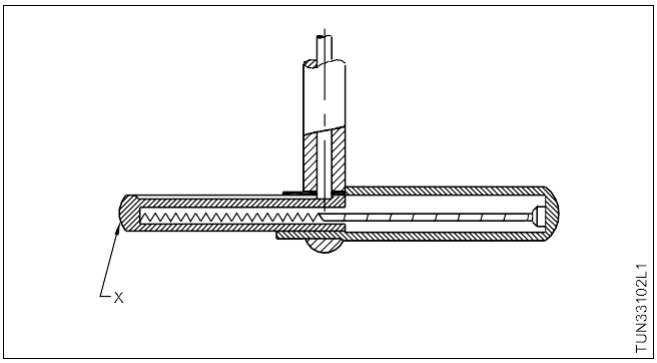
A 12mm to 152mm

B 12.7mm to 152mm

C 12mm to 152.4mm

D 12.7mm to 152.4mm

6 Name the part marked as 'X' in the figure shown



A Handle

B Telescopic leg

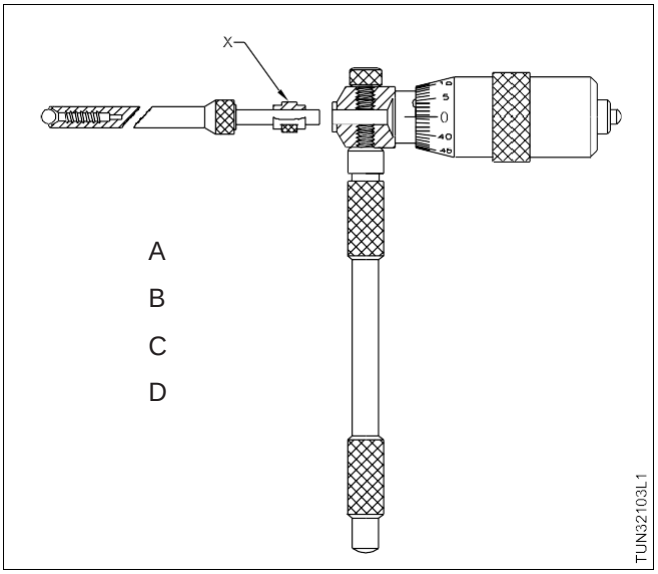
C Plunger lock

D Measuring face

Inside micrometer

Choose the correct answer

1 Name the part marked as 'X' shown in figure



A

B

C

D

A Lock screw

B Handle screw

C Spacing collar

D Extension rod

2 How many extension rods are available in an inside micrometer?

2 Nos

3 Nos

4 Nos

5 Nos

3 Inside Micrometer barrel has an adjustment of...

A 10mm

B 11mm

C 12mm

D 13mm

4 Using inside Micrometer what maximum range of dimension can be measured?

A 12mm

B 25mm

C 38mm

D 50mm

5 Inside micrometer is used to measure...

A Step length

B Internal shoulder

C Internal recess

D Internal thread

6 Inside micrometer specifically used for checking the...

A Cylinder bore

B Internal shoulder

C Internal recess

D Internal thread

Inside micrometer inch

Choose the correct answer

1 The least count of inside micrometer - inch is

A 0.01 inch

B 0.02 inch

C 0.001 inch

D 0.0001 inch

2 How much is the barrel adjustment inside micrometer inch?

A $1/4$ "

B $1/2$ "

C $3/4$ "

D 1"

3 How many extension rods are available in an inside micrometer (inch)?

A 2 Nos

B 3 Nos

C 4 Nos

D 5 Nos

4 Telescopic gauges are available in set of...

A $^{1}/_{4}$”

B $^{1}/_{2}$”

C $^{3}/_{4}$”

D 1”

5 Using inside micrometer (inch) maximum range of dimension that can be read is...

A 12mm

B 25mm

C 38mm

D 50mm

6 In inside micrometer (inch) the value of one main scale division is...

A 0.100”

B 0.010”

C 0.001”

D 0.0001”

Care for holding spilt bearing

Choose the correct answer

1 A shaft bearing is made in two pieces that are bolted together and is known as

A Plain bearing

B Split bearing

C Ball bearing

D Roller bearing

2 The housing contains a precision ground surface perpendicular to the bearing axis with three or four mounting holes is known as...

A Flanged split bearing

B Parallel split bearing

C Roller bearing

D Ball bearing

3 What is the another name of parallel bearing ?

A Ball bearing

B Shell bearing

C Roller bearing

D Needle bearing

4 Which one of the material is coated in shell bearing for heavy duty?

A Brass

B Zinc

C White metal

D Copper

5 A device which is to locate, clamp and hold the work is known as...

A Jig

B Fixture

C Clamping device

D Supporting device

6 For what purpose a fixture is used?

A Hold irregular jobs

B Hold cylindrical jobs

C Hold rectangular jobs

D Hold hexagonal jobs

7 Fixture is mainly used for...

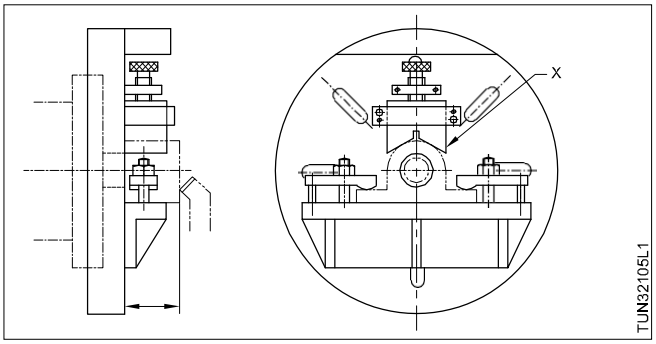
A Produce identical parts

B Mass production process

C Control the location /motion

D Guide the tool

8 Name the part marked as 'X' in the figure shown



A Balance weight

B 'C' clamp

C Adjustable 'V' block

D Work piece

Calculation involving fractional threads

Choose the correct answer

1 Formula for cut fractional lead is

A $\frac{DR}{DN} = \frac{\text{Lead of screw to be cut}}{\text{Lead of leads screw}}$

B $\frac{DR}{DN} = \frac{5}{127} \times \frac{\text{Lead of screw to be cut}}{\text{Lead of lead screw}}$

C $\frac{DR}{DN} = \frac{127}{5} \times \frac{\text{lead of screw to be cut}}{\text{lead of lead screw}}$

D $\frac{DR}{DN} = \frac{127}{5} \times \frac{\text{lead of screw to be cut}}{\text{lead of lead screw}}$

2 Calculate the change gear required to cut an oil groove having 8 turns in 11 inches on a lathe with a lead screw of four thread per inch

A $\frac{DR}{DN} = \frac{60}{30} \times \frac{110}{40}$

B $\frac{DR}{DN} = \frac{30}{60} \times \frac{40}{110}$

C $\frac{DR}{DN} = \frac{30}{60} \times \frac{110}{40}$

D $\frac{DR}{DN} = \frac{60}{30} \times \frac{40}{110}$

3 A mechanical system formed by mounting gears on frame and engaging gear, have a defined speed ratio, is known as

A Simple gear train

B Gear train

C Compound gear train

D Gear ratio

4 A compound of gear wheel arranged by only one driver and driven gear wheel arrangement is a ...

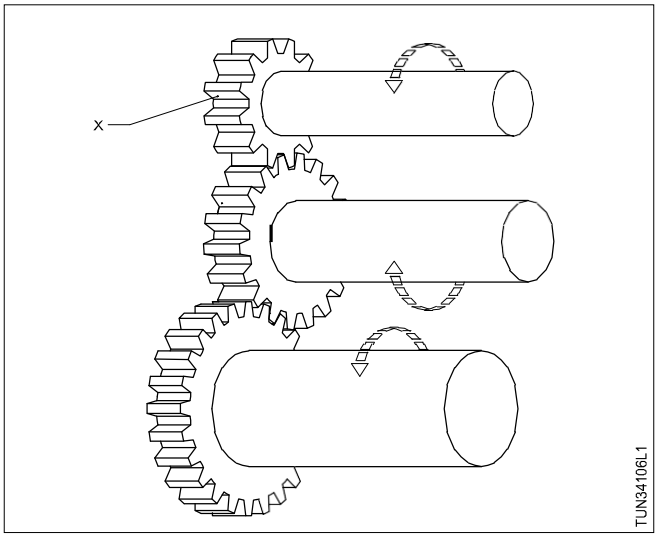
A Gear train

B Gear ratio

C Simple gear train

D Compound gear train

5 Name of the gear marked 'X' shown in figure



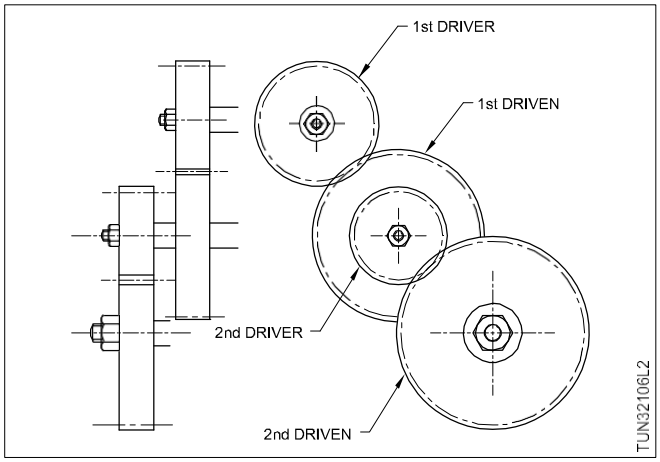
A Driver gear

B Idle gear

C Driven gear

D Follower gear

6 Name of the gear train shown in figure



A Simple gear train

B Compound gear train

C Feed change gear train

D Tumbler gear train

7 127 teeth is provided for cutting metric thread on a British lathe. This gear wheel is used as the

A Driver

B Driven

C Inter mediate

D 2nd driven

8 Find the gear required to cut a 3mm pitch in a lathe having a lead screw of TPI gear available from 20 to 120 teeth by 5 teeth with a special gear of 127 teeth

A 90 teeth gear is driver,127 teeth gear is driven

B 127 teeth gear is driver, 90 teeth gear is driven

C 127 teeth gear is driver, 60 teeth gear is driven

D 60teeth gear is driver, 127 teeth gear is driven

9 When thread cutting the carriage moves a shortest distance and engages with half nut this is known as...

A Trial engagement

B Sample travel

C Pre determined travel

D Trial travel

10 The pre determined travel depends upon the

A Type of thread

B Threading length

C Diameter of work

D Length of work

11 Find the required gears to cut 6 TPI and lead screw has 6mm pitch range of gears 20 to 120 by 5 teeth range with 127 gears.

A $\frac{Dr}{Dn} = \frac{127}{30} X \frac{20}{120}$

B $\frac{Dr}{Dn} = \frac{20}{120} X \frac{127}{30}$

C $\frac{Dr}{Dn} = \frac{20}{120} X \frac{30}{127}$

D $\frac{Dr}{Dn} = \frac{120}{20} X \frac{30}{127}$

12 Which one is related to the ratio of number of turns of work and lead screw

A Half nut engage lever

B Change gear train

C Norton gear box

D Chasing dial

Multiple thread function

Choose the correct answer

1 Which thread is used, if you require higher mechanical advantage?

A Single start thread

B Multi start thread

C Knuckle thread

D Buttress thread

2 Multi start thread is generally used on

A Screw jack

B Crane

C Fly press

D Leadscrew

3 For calculating lead of multi start thread formula is

A $P = \frac{1}{\text{No.of start}}$

B L = P x No.of start

C Start = $\frac{\text{Lead}}{\text{Pitch}}$

D d = Major dia – 2 x depth of thread

4 The distance between a point of thread to the another corresponding point of adjacent thread is...

A Pitch

B Lead

C Crest

D Root

5 Formula for metric thread on British lathe is

A $\frac{Dr}{Dn} = \frac{5\,PN}{127}$

B $\frac{Dr}{Dn} = \frac{127}{5\,PN}$

C $\frac{Dr}{Dn} = \frac{63PN}{1600}$

D $\frac{Dr}{Dn} = \frac{1600}{63\,PN}$

6 Formula for British thread on metric lathe

A $\frac{Dr}{Dn} = \frac{63\ PN}{1600}$

B $\frac{Dr}{Dn} = \frac{1600}{63\,PN}$

C $\frac{Dr}{Dn} = \frac{127}{5\,PN}$

D $\frac{Dr}{Dn} \times \frac{5\,PN}{127}$

7 Formula for Metric thread on British lathe using translating gear 63 teeth

A $\frac{Dr}{Dn} \times \frac{63\,PN}{1600}$

B $\frac{Dr}{Dn} \times \frac{1600}{63\,PN}$

C $\frac{Dr}{Dn} \times \frac{5\,PN}{127}$

D $\frac{Dr}{Dn} \times \frac{127}{5\,PN}$

8 Formula for British thread on metric lathe using translating gear 63 teeth

A $\frac{Dr}{Dn} \times \frac{5\,PN}{127}$

B $\frac{Dr}{Dn} \times \frac{127}{5\,PN}$

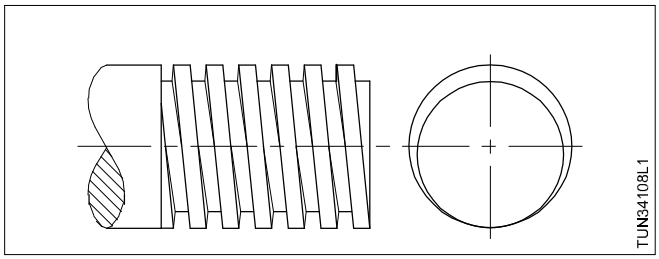
C $\frac{Dr}{Dn} \times \frac{63\,PN}{1600}$

D $\frac{Dr}{Dn} \times \frac{1600}{63\,PN}$

Multistate thread & methods

Choose the correct answer

1 Name the type of thread shown in the fig



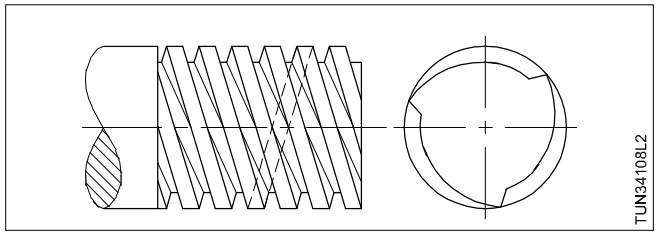
A Single start thread

B Double start thread

C Triple thread

D Four start thread

2 Name the type of thread shown in the fig



A Single start thread

B Double start thread

C Triple start thread

D Square thread

3 Which method is most suitable for cutting multi start thread

A By chasing dial

B By sliding compound slide

C By indexing the chuck

D By indexing the driver and driven gear

4 The face plate equally divided into120°,which type of thread can be produced...

A Single start thread

B Double start thread

C Triple start

D Four start thread

5 Calculate the change gears to cut a 3 start thread having a pitch of 1.5mm The lead screw has a pitch of 6mm

A $\frac{45}{60}$

B $\frac{60}{45}$

C $\frac{45}{80}$

D $\frac{80}{45}$

6 Which T.P.I thread can be cut using 8 division graduated British chasing dial?

A Even number TPI

B Odd number TPI

C Fractional pitch

D Even and odd pitch

Calculation involving shape of tool

Choose the correct answer

1 Compare with the pitch of square thread the square threading tool nose width should be?

A Half

B Equal

C Twice

D Thrice

2 Why the side clearance of the square threading tool is of prime importance?

A Give strength

B Prevent rubbing

C Give appearance

D Increase the tool life

3 Square and trapezoidal threads have more cross section and utilized for

A Fastening purpose

B Load lifting

C Precision instrument

D Electrical equipment

4 The modified square thread is similar to ordinary square thread, the depth of square thread is...

A Less than half pitch of thread

B Greater than half pitch of thread

C Same pitch of thread

D Twice pitch of thread

5 The modified square thread crest is chamfered at an angle of...

A 30°

B 45°

C 60°

D 90°

6 The modification of square thread included angle is...

A $27\frac{1}{2}°$

B 29°

C 30°

D 45°

7 The metric Acme thread included angle is...

A $27\frac{1}{2}°$

B $29°$

C $45°$

D $47\frac{1}{2}°$

8 In which application Acme thread is used?

A Screw jack

B Fly press

C Vice handle

D Lathe lead screw

9 The flank angle of buttress thread is...

A $27\frac{1}{2}°$

B 29°

C 45°

D $47\frac{1}{2}°$

10 The buttress thread are mainly used in the...

A Bench vice

B Carpentry vice

C Lathe lead screw

D Fly

11 The flank angle of modified buttress thread is...

A 30°

B 45°

C $47\frac{1}{2}°$

D 60°

12 In the modified form of buttress thread bearing flank has the degree of...

A 3°

B 5°

C 7°

D 10°

13 Inclination of flank angle of saw tooth thread is...

A $27\frac{1}{2}°$

B 30°

C 45°

D 60°

14 The load taking flank angle of saw tooth thread is...

A 1°

B 2°

C 3°

D 5°

15 In which application the worm wheel and worm threads are used...

A Transmit motion at right angle

B Transmit longitudinal movement

C Fly press

D Load lifting purpose

16 The depth of worm thread is more than..

A Square thread

B Knuckle thread

C Acme thread

D Buttress thread

17 The linear pitch of worm thread compared with circular pitch of worm gear must be...

A Less

B Greater

C Equal

D Twice

18 The ratio between the number of teeth to the pitch diameter to the gear is

A Pitch diameter

B Diametric pitch

C Linear pitch

D Pitch

19 Knuckle thread has the shape of...

A Square

B Trapezoid

C Round

D 'V' shape

20 Knuckle thread is mainly used in

A Lead screw

B Railway wagon coupling

C Power press

D Screw jack

Helix angle and its effects on threading tool clearance angle

Choose the correct answer

1 The formula for helix angle

A $\text{Tan } \theta = \frac{L}{\pi \times d}$

B $\text{Tan } \theta = \frac{\pi \times d}{L}$

C $\text{Tan } \theta = \frac{L \times \pi}{d}$

D $\text{Tan } \theta = \frac{L \times d}{\pi}$

2 The angle included between the direction of the plane perpendicular to the axis is...

A Flank angle

B Helix angle

C Rake angle

D Included angle

3 In larger diameter, the helix angle of the thread will be...

A Smaller

B Greater

C Medium

D Too greater

4 Lead angle of a square thread is by adding with the helix angle is

A 1°

B $1\ ^{1}/_{2^\circ}$

C 2°

D $2\ ^{1}/_{2^\circ}$

5 Compare the width of square thread and its depth. The width of square thread is

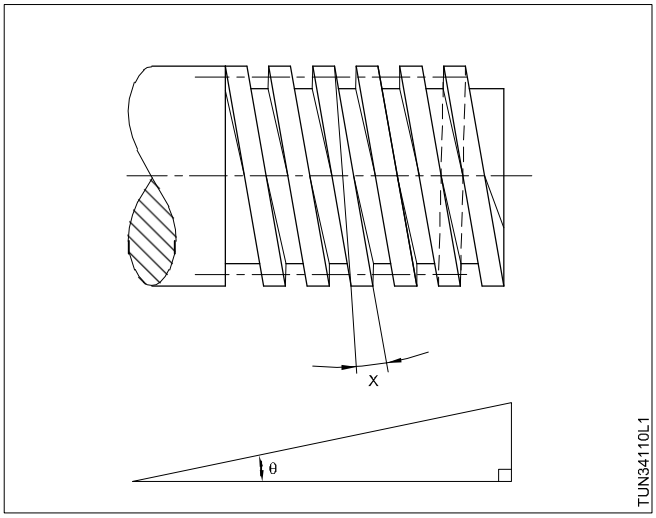
A Smaller

B Greater

C Equal

D Too greater

6 Name of the angle mark as 'X' shown in fig



A Thread angle

B Flank angle

C Rake angle

D Helix angle

7 The radius of knuckle thread is

A $1/4 \times$ Pitch

B $3/8 \times$ Pitch

C $1/2 \times$ Pitch

D $1/3 \times$ Pitch

8 Compare with the pitch depth of knuckle thread is...

A Bigger

B Smaller

C Too bigger

D Equal

ANSWERS:-ALL CHAPTERS

FORM TURNING:-

1. B
2. D
3. A
4. A
5. B
6. C
7. C
8. B

DIAL TEST INDICATOR:-

1. B
2. A
3. D
4. B
5. D
6. B
7. D
8. D
9. A
10. B
11. C
12. B
13. C
14. B

JIGS 7 FIXTURES:-

1. D
2. B
3. A
4. D
5. B
6. C
7. A
8. B
9. C
10. B
11. D
12. A
13. C
14. C
15. C

CUTTING TOOL MATERIAL:-

1. C
2. B
3. B
4. D
5. B
6. C
7. B
8. C
9. C
10.
11.
12. B
13. C

SINE BAR:-

1. A
2. B
3. A
4. B
5. B
6. D
7. C
8. B
9. B
10. C

CUTTING SPEED, FEED, TURNING AND DEPTH OF CUT:-

1. A
2. D
3. A
4. B
5. A
6. B
7.
8. A
9. B
10.
11. B
12. C
13. B
14. C
15. D
16. C
17. D
18. A
19. C
20. D
21. B
22. C
23. D
24. A
25. C
26. B
27. C

LATHE ACCESSORIES:-

1. D
2. A
3. A
4. B
5. C
6. D
7. D
8. C
9. A
10. C
11. C
12. A
13. B
14. D
15. A
16. A
17. C
18. A

SURFACE FINSH SYMBOL USED ON WORKING BLUE PRINT:-

1. B
2. A
3. B
4. C
5. A
6. D
7. D
8. C
9. B
10. A
11. C
12. B
13. C
14. C
15. A
16. B
17. A
18. D
19. B
20. B
21. A
22. D
23. C
24. C
25. A
26. B
27. C
28. B
29. B
30. B
31. D
32. C
33. D
34. B
35. A
36. B
37. C
38. A
39. B
40. C
41. D
42. B
43. C
44. A
45. A
46. D

PREVENTIVE MAINTENANCE:-

1. A
2.
3. B
4. A
5. C
6. B
7. C
8. B
9. A
10. A
11. A
12. B
13. A
14. C
15. D
16. D
17. A
18. D
19. C
20. D
21. C
22. A
23. D
24. D
25. C

STEDY REST:-

1. B
2. C
3. C
4. B
5. A
6. B
7. C
8. D
9. C
10. D
11. B
12. B
13. C
14. D
15. B
16. C

DIFFERENT ATTACHMENT:-

1. A
2. B
3. C
4. C
5. D
6. D
7. A
8. A
9. C
10. C
11. D
12. A
13. A
14. C
15. B
16. D

VARIOUS PROCEDURE OF THREAD MEASUREMENT:-

1. A
2. B
3. C
4. D
5. A
6. C
7. C
8. D
9. A
10. B
11. B
12. B
13. C
14. B
15. C
16. D
17. B
18. C
19. B

TOOL MAKER'S BUTTON:-

1. C
2. A
3. D
4. A
5. D
6. A
7. B

TELESCOPIC GAUGE CONSTRUCTION, USES:-

1. B
2. B
3. A
4. C
5. D
6. D

INSIDE MICROMETER:-

1. C
2. C
3. D
4. D
5. B
6. A

INSIDE MICROMETER INCH.:-

1. C
2. B
3. C
4.
5.
6. A

CARE FOR HOLDING SPILT BEARING:-

1. B
2.
3. B
4. C
5. A
6. A
7. B
8. C

CALCULATION INVOLVING FRACTIONAL THREADS:-

1. A
2. C
3. B
4. D
5. A
6. B
7. B
8. A
9. C
10. A
11. A
12. C

MULTIPLE THREAD FUNCTION:-

1. B
2. C
3. B
4. A
5. A
6. A
7. B
8. C

MULTISTATE THREAD & METHODS:-

1. A
2. B
3. A
4. C
5. A
6. A

CALCULATION INVOLVING SHAPE OF TOOL:-

1. A
2. B
3. A
4. A
5. B
6. D
7. B
8. D
9. C
10. B
11. B
12. C
13. B
14. C
15. A
16. C
17. C
18. B
19. C
20. B

HELIX ANGLE AND ITS EFFECTS ON THREADING TOOL CLEARANCE ANGLE:-

1. A
2. B
3. B
4. B
5. C
6. D
7. A
8. D

CNC Technology basics

Choose the correct answer

1 What started in the second phase of Industrial automation after 1950?

A Using with simple production machines

B Using simple automatic machines

C Using simple copying machine

D Physical work are placed in the control of machine

2 Which year, the commercial industrial robot was manufactured along with CNC systems ?

A 1961

B 1950

C 1972

D 1958

3 What is the expansion of CAD ?

A Computer Aided Development

B Computer Aided Design

C Computer Automatic Development

D Computer Automatic Design

4 What is the expansion of CAM?

A Computer Aided Manufacturing technique

B Computer Automatic Management

C Computer Aided Machine manual

D Computer Aided Marking technique

5 Which one is not the advantage of numerical control machines?

A High production rate

B Less component rejection

C Accuracy is achived

D Editing of the program is easy

6 What is the disadvantage of NC system?

A Accuracy cannot be achieved

B Increased component rejection

C Skilled operator involved

D If tape is spoiled, entire program, is affected

7 What is the use of Servo mechanism in a CNC machine?

A Correction of feed by motors

B Quick indexing

C Heavy load movement of slides

D Velocity error correction

8 Which part of a CNC machine assist accurate friction free, backlash free, movement. ?

A Servo mechanism

B Curvic coupling

C Linear ball screw

D Encoder and tacho generator

9 How rapid movement is achieved through a servo feedback motors while keeping idle time as minimum in a CNC machine. ?

A By loading / unloading

B By tool change time

C By movement of slide

D By process control

10 Which device assist in higher metal removal rate in a CNC Machine?

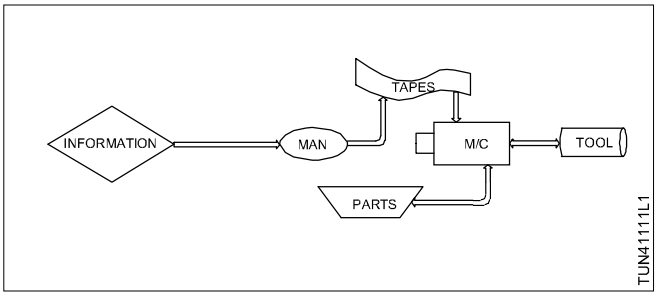
A Multi spindle

B Servo mechanism

C Techno generator

D Linear ball screw

11 Name the system shown ?



A Conventional

B Auto tool changer

C Numerical control

D Computer numerical control

12 Which type of chuck is used in a CNC lathe?

A Two jaw chuck

B Three jaw chuck

C Hydraulic chuck

D Four jaw chuck

13 What is the maximum machining length in a CNC lathe?

A 320 mm

B 245 mm

C 200 mm

D 340 mm

Machine model, control system and specification

Choose the correct answer

1 In the CNC machine head movement is....

A 600 mm

B 450 mm

C 420 mm

D 500 mm

2 In CNC machine x axis Traverse is....

A 600 mm

B 650 mm

C 800 mm

D 900 mm

3 In the CNC machine column movement is....

A 600 mm

B 450 mm

C 420 mm

D 400 mm

4 In the CNC machine spindle taper is....

A ISO 40

B Morse taper

C Jarno toper

D Pin taper

5 In CNC machine rapid Traverse of feed is...

A 20 /m min

B 0.8 m /min

C 4 m/ min

D 3 m/ mm

6 What is the spindle speed range in a CNC machine?

A 40 -500 Rpm

B 40 -4000 Rpm

C 10 -600 Rpm

D 30 -1000 Rpm

7 The electric power requirement of a CNC machine is

A 50 KVA

B 5 KVA

C 10 KVA

D 7 KVA

8 In the CNC machine XYZ axis, cutting feed is

A 1 to 20 mm/ min

B 5 to 50 mm / min

C 1 to 1000 mm /min

D 1 to 100 mm/min

9 CNC machine motor power is....

A 1.0 KW

B 1.5 KW

C 2 KW

D 3.7 KW

10 In a CNC machine what is the hydraulic oil capacity?

A 20 ltr

B 10 ltr

C 30 ltr

D 90 ltr

11 In a closed loop control which device can continuously ascertain the distance actually travelled by the tool and then monitor the same in the form of the feedback signals to the control?

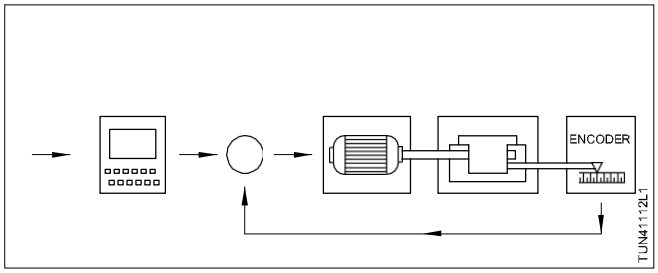
A Comparator

B encoder

C computer

D Drive motor

12 Name the CNC control system



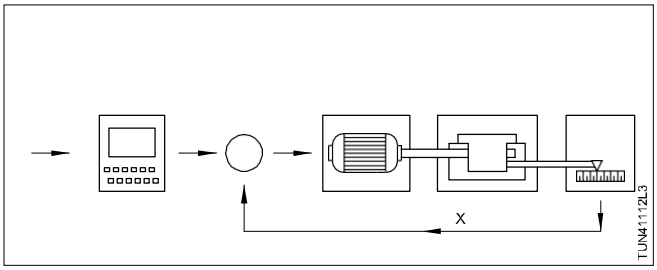
A Closed loop control system

B Open loop control system

C Motion type CNC control system

D Number of axis type CNC control system

13 n a Closed loop control system of a CNC machine is shown name the part marked as 'X'



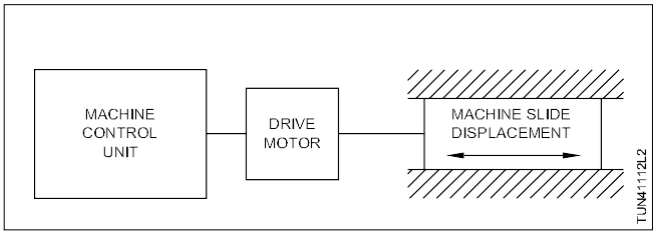
A Feedback signal

B Comparator

C Traverse measurement

D Command value

14 Name the CNC control system



A Closed loop control system

B Open loop control system

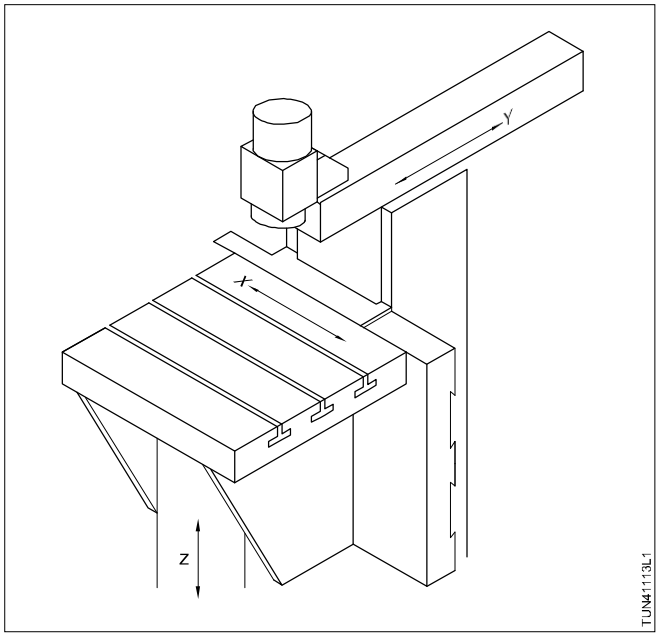
C Motion type CNC control system

D Number of axis type CNC control system

Axis Convention of CNC machine

Choose the correct answer

1 What is the type of CNC machine shown in fig?



A CNC vertical machining centre

B CNC horizontal machine centre

C CNC horizontal boring mill

D CNC automatic tool changer

2 What does the fore finger indicates in right hand thumb rule?

A y axis

B x axis

C z axis

D a axis

3 What is the position of z - axis in the axis nomenclature?

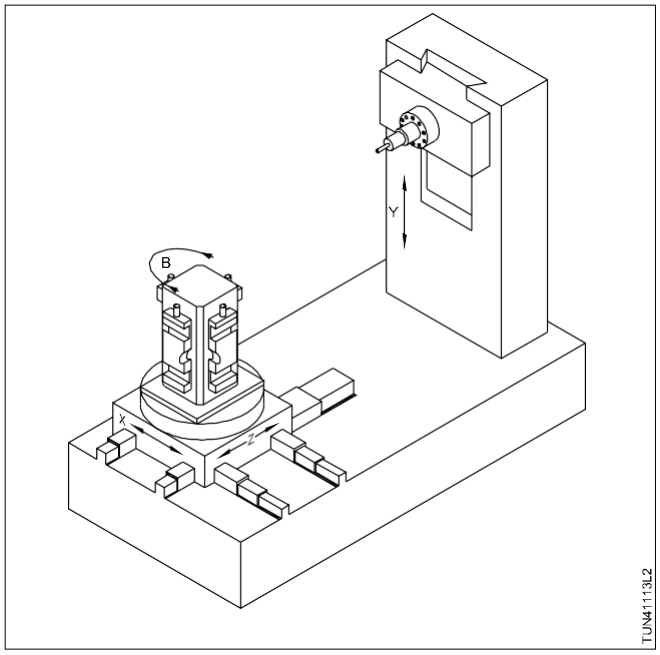
A Perpendicular to x- axis

B Perpendicular to work holding surface

C parallel to work holding surface

D Perpendicular to both x and y axis

4 Identify the type CNC machining centre shown?



A Vertical machining centre

B Horizontal machining centre

C Automatic tool changer

D Automatic pallet changer

5 What does the middle finger indicate in the right hand thumb rule of Axis nomenclature?

A Z - axis

B X - axis

C Y - axis

D B - axis

6 Which CNC system is suited only for drilling operations?

A Straight cut control

B Contouring control

C Angular point control

D Point - to - point control

7 What is the function of straight cut control system in CNC?

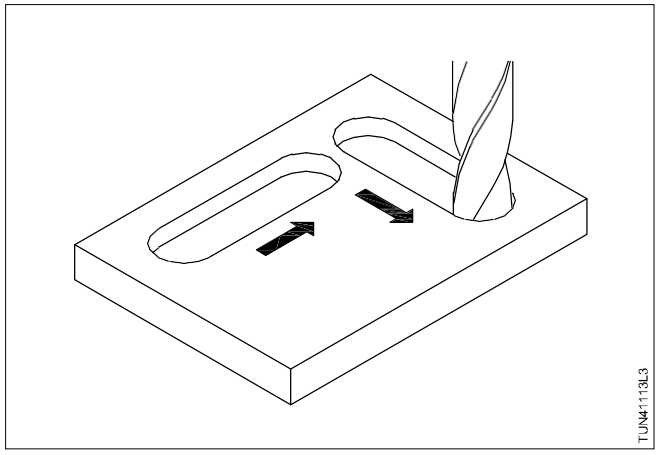
A Provide only one feed axis

B Provide feed motion in two axis simultaneously

C C Provide feed control in three axis

D provide feed motion in two axis but not simultaneously

8 What type of a CNC system shown in fig?



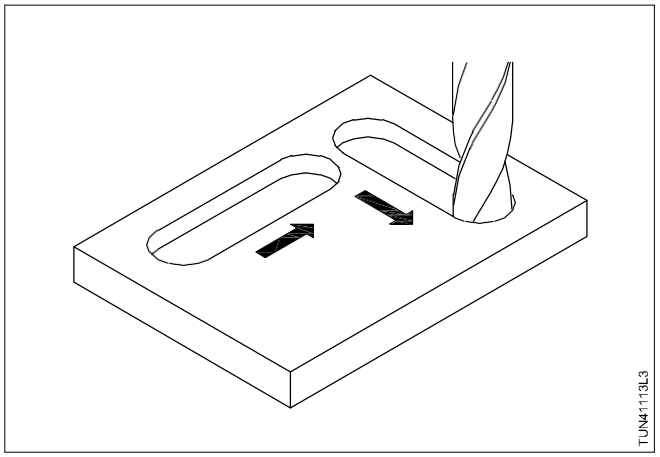
A straight cut control

B Point to point control

C Contouring control

D Milling tool coordinate system

9 Identify the control system of the CNC Mc shown ?



A Contouring control

B 2 - D contouring control

C 3 - D contouring control

D 21/2 - D contouring control

10 How the dimensioning of a turned component generally specified in part programming for turning centers?

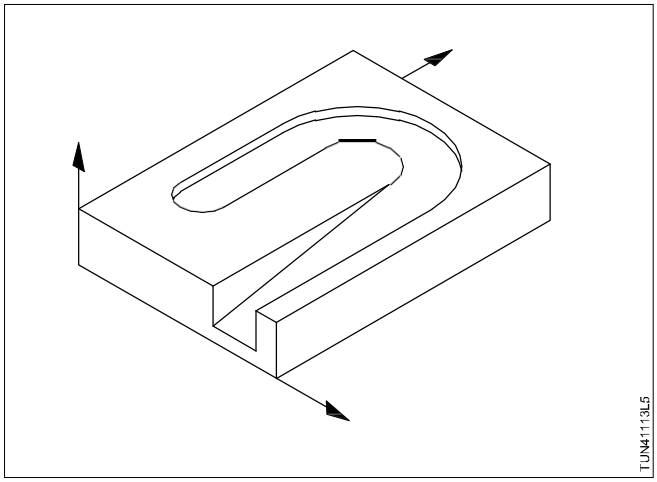
A By length of component

B By width of component

C By thickness of material

D By diameter of component

11 Name the control system



A Contouring control

B 3 - D contouring control

C 2 - D contouring control

D 2 1/2 - D contouring control

12 Name the 'X' marked axis in the right hand coordinate system of machine axis identification

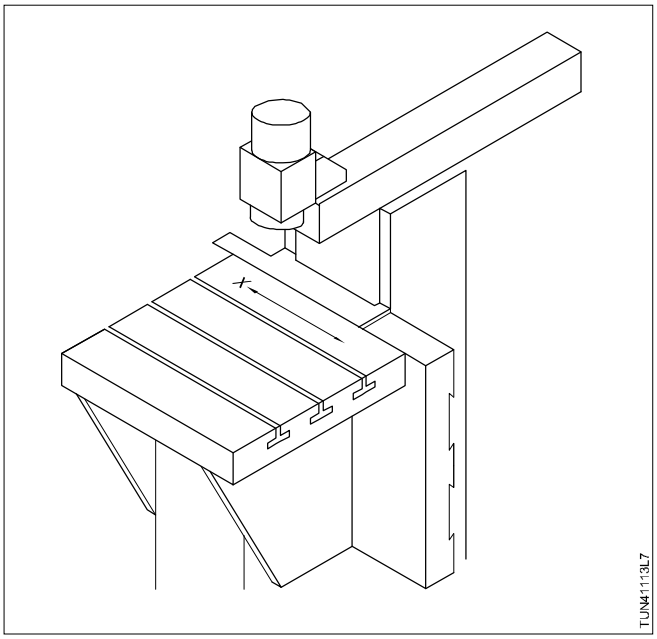
A 'X' axis

B y axis

C Z axis

D C axis

13 Identify the part marked as system used in Turning centers



A Tool datum

B Machine datum

C Work datum

D Tool Turret

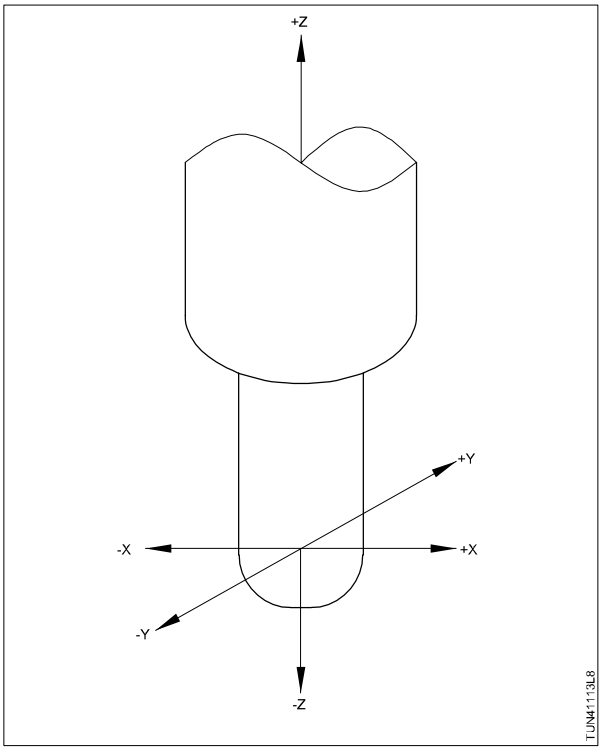
14 What is term used to indicate the difference between the tool tip position and the turret datum in the axis system of CNC m/c ?

A Off set

B Radial axis

C Spindle axis

D Z axis



15 Name the CNC system shown ?

A Contouring control system

B Straight cut control system

C Milling co - ordinate system

D NC coordinate system

16 What is the direction the cutting tools movement in milling, drilling and lathe as per the axis system of CNC?

A Negative X direction

B Positive X direction

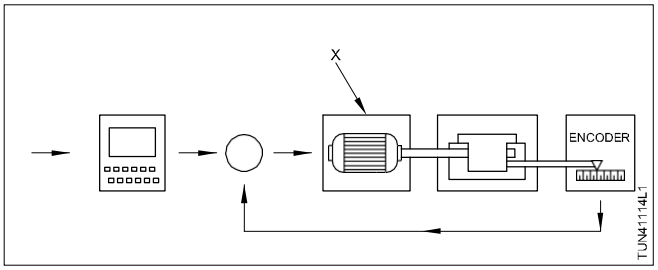
C Positive Z direction

D Negative Z direction

Importance of feedback system and concept of co-ordinate geometry

Choose the correct answer

1 Identify the part marked as 'X' in feedback system of CNC machine?



A Slide

B Drive motor

C Encoder

D Traverse measurement

2 Importance of FB system what is the other name for the feedback system in a CNC machine?

A Measuring system

B Analyzing system

C Copying system

D Control system

3 What is the polar coordinate system used in CNC?

A System using pair of coordinate from origin

B Rectangular coordinate system

C System following Cartesian coordinate

D System using a pole and polar axis length

4 What is the Cartesian coordinate system

A Absolute coordinate system based on origin

B Incremental coordinate system

C Polar coordinate system

D Relative coordinate system

5 What is the other name used in a CNC m/c to represent incremental coordinate?

A Absolute coordinate

B Polar coordinate

C Relative coordinate

D Cartesian coordinate

Coordinate Geometry & Machine Axis

Choose the correct answer

1 Which quadrant in Cartesian coordinate will have positive value both in X and Y axis?

A Fourth

B Second

C Third

D First

2 In which directions, Cartesian coordinates can be located in a 3 axis machine?

A Left - right, up / down

B Left - right, up - down / forward -backward

C Left - right only

D Up down / left right

3 A 5 meter pole, kept 3 meters from origin in x axis and 4 meters from y axis, how do we represent the pole peak in 3 coordinates?

A (5, 4, 3)

B (3, 4, 5)

C (4, 5, 3)

D (4, 3, 5)

4 Which quadrant will have negative & positive value in rectangular coordinate system?

A first

B second

C Third

D Fourth

5 What is the name of the plane perpendicular to x & y axis respectively?

A Primary

B Secondary

C Tertiary

D supplementary

6 Which quadrant in Cartesian coordinate system will have negative & positive valves in X and Y axis respectively?

A First

B Second

C Third

D Fourth

7 Which quadrant falls under (-,-) x, y axis , in Cartesian coordinate system, ?

A First quadrant

B Second quadrant

C Third quadrant

D Fourth quadrant

8 If the index finger points x axis using right hand rule, what does the thumb indicates

A X axis

B Y axis

C Z axis

D XYZ axis

9 How is the co-ordinate represented in a three dimensional space?

A (x,y)

B (y,Z)

C (Z,n)

D (x,y,z)

Preparing of Part programming

Choose the correct answer

1 How to identify sequence of block performed practically by the tool in part programming of a CNC m/c ?

A By G - Words

B By F - Words

C By N - Words

D By T - Word

2 What is the role of G - words in part programming function ?

A Preparatory function

B Sequence of operation by the tool

C Indicate position of tool motion

D Specify the cutting speed process

3 Which is used to program the proper feed rate in the preparation of part programming?

A N - word

B F - Word

C G - Word

D S - Word

4 What is the function of S - word in the preparation of part programming in CNC turning?

A Specifies spindle speed of the process

B Indicate position of tool motion

C Describing instruction of tool movement

D Instruction regarding specific operation

5 What is the preparatory function of G 32 code?

A Rapid traverse

B Linear interpolation

C Thread cutting

D Circular interpolation

6 Which G code describe machine tool movement of a grooving cycle ?

A G 73

B G 75

C G 92

D G 98

7 Which code describes the auxiliary function of a CNC machine?

A N - Word

B M - Word

C G - Word

D T - Word

8 Which is type of G code system is most commonly followed ?

A G codes of system A

B G codes of system B

C G codes of system C

D G codes of system D

9 Which list of codes are defined and implemented by the machine tool builder?

A M codes

B G codes

C N codes

D T codes

10 What is the function of M02 cod in part programming?

A Program stop

B Optional stop

C End of program execution

D coolant ON

11 What is the function of word address “Q” in CNC system of part programming?

A Miscellaneous function

B defines last contour block number in caned cycle

C coordinate data for three axes

D sequence number to identify a block

12 Which code of program makes a machine stops permanently in a CNC system?

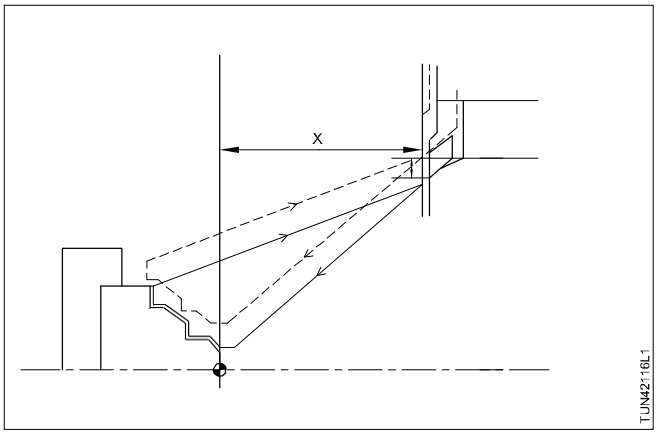
A M 03

B M 09

C M 02

D M 08

13 Name the distance marked as “X” part of tool geometry off set



A Z - axis coordinate

B X - axis offset amount

C Spindle centre line

D Z - axis offset amount

14 Which program language is extended subset of APT with additional boring and turning data ?

A AUTOMAP

B EXAPT

C PROMPT

D ADAPT

15 What is the purpose of L code used in part programming?

A Describe how many times subroutine is to be repeated

B Provide program information

C Define geometric elements of work piece

D Control variety of different machining operation

16 Which program language is very much suitable for 2 1/2 axis control?

A APT

B ADAPT

C AUTOMAP

D PROMPT

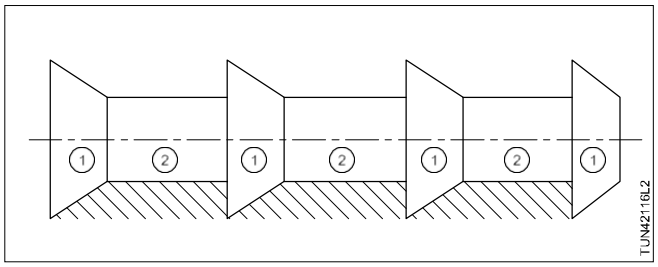
17 Name the type of sub - routine in the figure shown

A Milling subroutine

B Turning subroutine

C Drilling subroutine

D Machining subroutine



Operational modes

Choose the correct answer

1 Which operational mode is used for moving the turret in X and Z direction in CNC system ?

A Single block mode

B Auto mode

C Jog mode

D Edit mode

2 Which mode input the program command manually and executes the program?

A Edit mode

B Jog mode

C MDI mode

D Auto mode

3 What is the function of incremental jog mode in a CNC system?

A Execute the program continuously one by one B

Input the program command manually

C Moving the turret in X and Z direction

D Move the turret in micron level

4 What factors are recommended for improving the wear life of a tool in a CNC lathe?

A Machine vibrations controlled

B Higher cutting speed

C Lower cutting speed

D Lesser vibrations & low cutting speed.

5 What selection should be done in a CNC lathe to get a finish of 0.6 Ra value?

A 0.2 mm Nose radius & 0.05 mm feed rate

B 0.2 mm Nose radius & 0.17 mm feed rate

C 0.8 mm Nose radius X 0.69 mm feed rate

D 2.4 mm Nose radius X 0.17 mm feed rate

6 How should be the tool nose radius and the feed rate controlled to get a very good job finish ?

A Very high feed rate, & higher nose radius

B Very high feed rate, & lesser nose radius

C Low feed rate, and very small nose radius

D Very low feed rate, medium nose radius

7 How will be the surface finish of a job turned in CNC lathe, with a very high feed and high tool nose radius?

A Coarse

B rough

C medium

D very smooth

8 What formula for fixing the spindle speed in a CNC machine?

A $\frac{V.1000}{\pi D}$

B $\frac{\pi DN}{1000}$

C V.S.A

D $\frac{V.S.A\ Ks}{6000N}$

9 Which formula is use a to calculate the metal removal rate via CNC lathe. ?

A $\frac{V\ 1000}{\Pi D}$

B $\frac{\Pi DN}{1000}$

C V.S.A

D $\frac{V.S.A\ rs}{6000\ N}$

10 Which formula is related to finding out the spindle power in a CNC lathe?

A $\frac{V\ 1000}{\Pi D}$

B $\frac{\Pi DN}{1000}$

C V.S.A

D $\frac{VSA\ ks}{6000N}$

11 Which formula is related to the cutting speed of the job in a CNC lathe?

A $\frac{V\ 1000}{\Pi D}$

B $\frac{\Pi DN}{1000}$

C V.S.A

D $\frac{VSA\ ks}{6000N}$

12 In which mode we can move the turret, by 1 micron, 10 micron or 1000 micron level in a CNC lathe?

A Incremental Jog mode

B Edit mode

C Auto mode

D MPG mode

13 Which control switch should be used for stopping the CNC machine?

A Feed rate over ride switch

B Rapid rate over ride switch

C Single speed over ride switch

D Emergency stop switch

14 Which mode is to be switched to 'ON' position to execute only a specific block in a program ?

A Auto mode

B MDI mode

C Single block mode

D Edit mode

15 Which point is located in the front or rear end of the job, in relation to Machine datum?

A Machine Zero point

B Work zero point

C Tool zero point

D Floating zero point

16 Which point in a CNC machine is fixed by the machine manufacturer?

A Work piece Zero

B Machine zero

C Tool zero

D Floating Zero

17 Which mode is generally used to move the turret in X & Z axis in a CNC lathe, for getting offset valve?

A MDI mode

B Auto mode

C Jog mode

D Edit mode

18 In which mode the data can be fed into the program manually for execution?

A Auto mode

B MDI mode

C JOG mode

D Single block mode

19 When a Single block switch is in OFF position, how does the program get executed?

A Only one block gets executed

B Program gets executed continuously

C One block and the next block executed

D Program stops after two or three blocks

Types of offsets

Choose the correct answer

1 To make the tool move with reference to the job is known as

A Work offset

B Geometric offset

C Wear offset

D Tool offset

2 How many types of off - sets are used in a machine operation?

A 4

B 3

C 2

D 1

3 Clamping the job in the chuck of the machine is called

A Work offset

B Geometric offset

C Wear offset

D Tool offset

4 The dimension of the job may increase or decrease the original programmed dimension, to rectify this defect is called

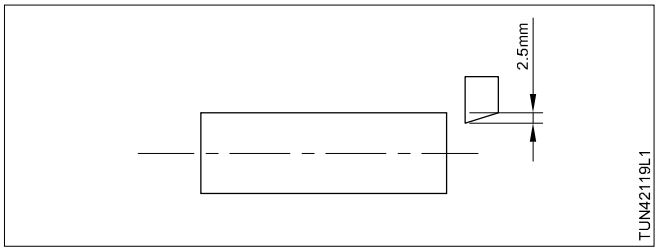
A Wear offset

B Work offset

C Machine offset

D Geometrical offset

5 Write program for depth of cut of 2.5 mm is given



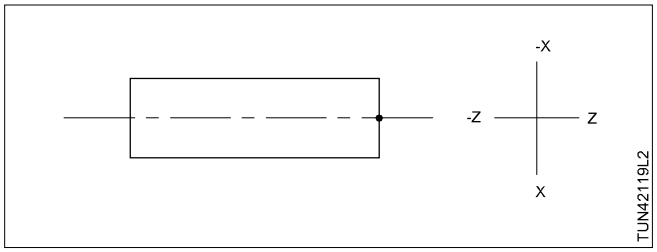
A N 007 G 00 X +5

B N 004 G 01 Z -2.5

C N 005 G 01 X 5Z -30

D N 003 M 08 G 01 X -2.5

6 Write program to set the tool at (0.0) position assign spindle speed and rate.



A N 004 G 01 Z-30

B N 006 G 00 Z 60

C N 005 G 01 X 5 Z - 30

D N 002 G 00 X 0 20 M 03 S1000 F100

7 Write program for single turning operation for the length of - 30mm

A N 009 G 01 Z-30

B N 011 G 00 X 020

C N 008 G 01 X - 2.5

D N 010 G 01 X 5 Z - 30

8. Program for coolant off, spindle stop, end of the program is

A N 008 401 X -2.5

B N 009 G 01 Z-30

C N 010 G 01 X 52-30

D N 012 M 09 M 05 M 02

9 Write the program Taper turning operation for the length of -30 mm in performing

A N 008 G 01 X -2.5

B N 009 G 01 Z-30

C N 010 G01 X 5Z -30

D N 011 G00 X 020

10 Explain the program N 006 G 00 Z60

A Again, in feed of 5 mm in given

B Depth of cut of 2.5 mm is given

C Tool retracts to its initial

D Tool is moving towards left

11 Explain the program N0 11 M 02

A Set the tool

B End of program

C Tool goes back by 2 mm

D Tool rapidly moves to position

12 Write the program for threading operation for a length of 52 mm (50 + 2) with pitch length of 3 mm

A N 008 400 X - 1.5 F 100

B N 002 G 00 X 020 M035 1000 F 100

C N 006 G 00 X 1 F 300

D N 005 G 33 Z -52 K 3 M035100

Tool path study of machining operation(Straight turning)

Choose the correct answer

1 In a turning operation, which preparatory code is used for getting a constant surface speed ?

A G 90

B G 71

C G 96

D G 98

2 Which preparatory code is used in a programming both in the beginning as well as at the end of program?

A G 01

B G 21

C G 28

D G 98

3 In a step turning operation, which preparatory code is used to remove material to the drawing size from the original stock?

A G 70

B G 73

C G 90

D G 71

4 In a canned cycle format G 71 P - Q - U - W - F what does work P indicates?

A Finishing allowance

B Starting block

C Ending block

D Depth of cut per pass

5 In the canned cycle G 71 P - Q - U - W - F what does the word 'W' stands for?

A Ending block no

B Depth of cut

C Relief amount

D Finishing allowance 'Z

6 In the canned cycle G 71 P - Q - U - W F what does the word 'U' stands for ?

A Relief amount

B Depth of cut /pass

C Finishing allowance in X'

D Finishing allowance in Z'

7 In which canned cycle the word 'R' indicates retract value?

A Facing cycle

B Peck drilling cycle

C Pattern repeating cycle

D Turning cycle

8 What is word R represent in the facing cycle syntax G 72 P - Q - U - X - W - F?

A Depth of cut

B Finishing allowance

C Relief amount

D Depth of cut / pass

9 Where the canned cycles are used in CNC programming?

A Stock removal

B Machining operation

C Drilling operation

D tapping operation

Cutting parameters, Cutting speed and feed, depth of cut, CSM, tool wear, tool life

Choose the correct answer

1 What is the unit of cutting speed?

A Metre / min

B rpm

C mint

D mm / min

2 The speed at which the cutting edge passes over the material is known as....

A Cutting feed

B Cutting speed

C Cutting time

D Cutting depth

3 Find out the rpm of a spindle of 50 mm bar to cut 25 m/ Min

A 1595 rpm

B 200 rpm

C 179 rpm

D 159 rpm

4 What is the formula for cutting speed?

A $\frac{\pi dh}{1000}$

B $\frac{dn}{1000}$

C $\frac{n}{\pi D} X1000$

D $\frac{\pi D}{n} X1000$

5 Calculate the circumference of the job if the cutting speed is 120 m/min and rpm is 756

A 157.12

B 70 .56

C 235.68

D 120.57

6 Calculate rpm of spindle if the cutting speed 120 m/ min and length of metal passing the cutting tool RPM 78.56

A 756

B 509

C 1528

D 159

7 Unit of feed is?

A m/min

B mm/rev

C m/rpm

D rpm

8 Calculate the cutting speed of a job unit a speed of RPM 509 and the job circumference is 235.68 mm

A 100

B 80

C 120

D 70

9 The tool movement a along the cut for each revolution of the work is known as

A feed

B speed

C depth of cut

D rpm

10 The difference between machined and un machined surface is known as

A rpm

B depth of cut

C feed

D cutting speed

11 Write in Fanuc for cutting speed of 250 m/min ?

A G 96 S 250

B G 00 X 38

C G 97 S 600 M04

D G 92 S 3000

12 Cutting speed of carbide tools are Higher than the H.S.S state how much time higher?

A 2 to 3 times

B double the time

C 3 to 4 times

D 6 times

13 In which, method of control system related to the intermediate points and the speed of the motor ?

A Grooving

B Interpolation

C Grooving feed

D Control system

14 Write in fanuc limit the RPM to 3000

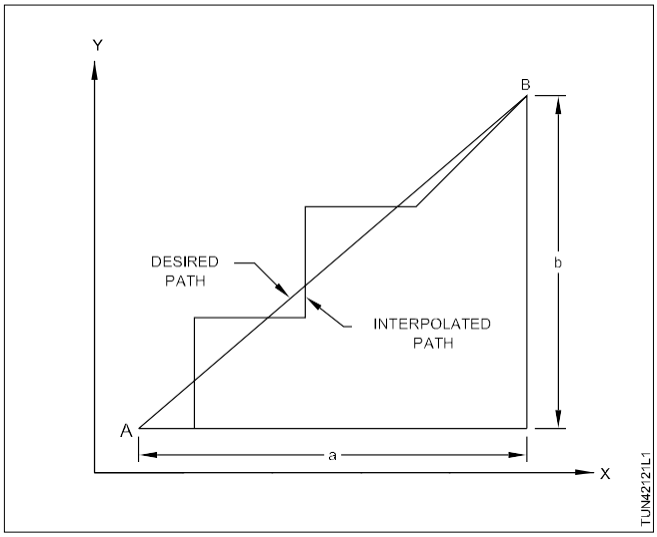
A G 00 X 38

B G 96 S 250

C G 92 S 3000

D G 017 S 600 M04

15 Name the type of interpolation fig 1 (a)



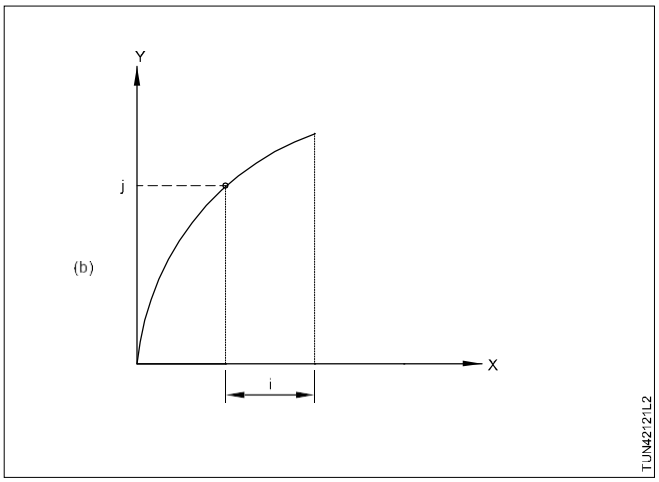
A Straight line interpolation

B Linear interpolator

C circular interpolator

D Helical interpolation

16 Name the type of interpolation



A Circular interpolation

B Helical interpolation

C Parabolic interpolation

D Logarithmic interpolation

17 Write program for a tool travel a distance of 60 mm along the x axis at feed rate of 30 mm/min from its existing position. ?

A G 91 G71 G01X 60 F30

B N 40 G 0 X 50 Y 40 Z 2

C N 4090 X 30 Y 40 Z 2

D N 70 G1 Z2 F 1000

18 The slides of a CNC machine are driven by

A A/C motor

B Synchronized motor

C servo motor

D Hydraulic

19 $c = Vt^n$ formula denotes

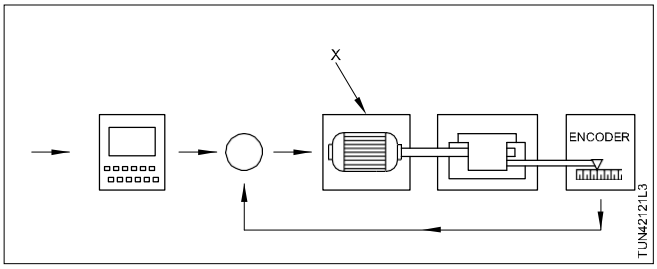
A Tool life

B Cutting speed

C Cutting feed D

Depth of cut

20 Name the part marked as 'X' in the figure shown



A Slide

B Computer

C Drive motor

D Encoder

21 The life of a lathe tool is 8 hours when operating at a cutting speed of 40 m/min. Given that $vt^n = C$, find the highest cutting speed that will give a tool life of 16 hours. The value of n is 0.125.

A 36.68 m/min

B 40 m/min

C 37 m/min

D 39 m/min

Cutting tool materials for Turning

Choose the correct answer

1 As per ISO Designation system Boring Bar of a lathe is described as S 32 U S K K C R 12 what R indicate?

A Shank type

B Clearance angle

C Tool length

D Cutting direction

2 As per ISO Insert the tool specified as (C N M G 120408) the second letter N specifies

A shape

B relief angle

C grade

D material

3 ISO standard and is commonly followed to specify in inserts tool e.g CNMG 120408 first letter 'C' indicate

A shape

B grade

C material

D type

4 How many times, the cutting speed of ceramic tool in greater them HSS?

A 20 times

B 15 times

C 4 times

D 40 times

5 Which cutting tool material is only 1/4 th the cutting speed of ceramic tool?

A Carbide

B Diamond

C High speed steel

D stellites

6 The diamond is the hardest known material; its cutting speed as compared to HSS is....

A 100 times compared to higher

B 50 times compared to higher

C 25 times compared to higher

D 20 times compared to higher

7 Carbide tool material is a mixture of pure carbide and pure tungsten powder in the ratio of....

A 94 % and 6%

B 50 % and 50%

C 20% and 80%

D 60% and 40%

8 In stellite alloy, element, cobalt range is

A 40 % to 48%

B 30% to 35%

C 25% to 28%

D 35% to 38%

9 In stellite alloy elements, the chromium range is

A 30% to 35%

B 25% to 30%

C 28% to 30%

D 37% to 40%

10 What is the stellite metal alloy composed of ?

A Cobalt, chromium tungsten

B Cobalt, chromium ,tin

C Cobalt, carbon, chromium

D Cobalt, carbon, tungsten

11 H.S.S can operate at cutting speed 2 to3 times higher than the carbon steel and retain its hardness up to

A 400° C

B 500° C

C 600° C

D 900° C

12 The material must withstand excessive wear even though the relative hardness of the tool materials changes is known as....

A high resistance to wear

B hardness

C Toughness

D Frictional co - efficient wear

13 In high carbon steel the percentage of carbon range is -

A 0.8 to 1.5

B 0.2 to 0 .6

C 0.4 to 0.7

D 1.5 to 2

14 Ability to retain hardness under severe working conditions is.....

A Hardness

B Toughness

C Frictional co-efficient

D High resistance wear

15 Ability to retain hardness under severe working conditions?

A hardness

B Toughness

C Frictional co - efficient

D high resistance

16 As per ISO inserts tool specified of CNMG 12040 8 what does 4th letter (M) indicates

A shape

B Bent tail carrier angle

C grade

D geometrical features

17 As per ISO designation system boring bar of a lathe is described as S 32 U S K K C R 12 what is the significance of 'U'?

A shank type

B **clearance angle**

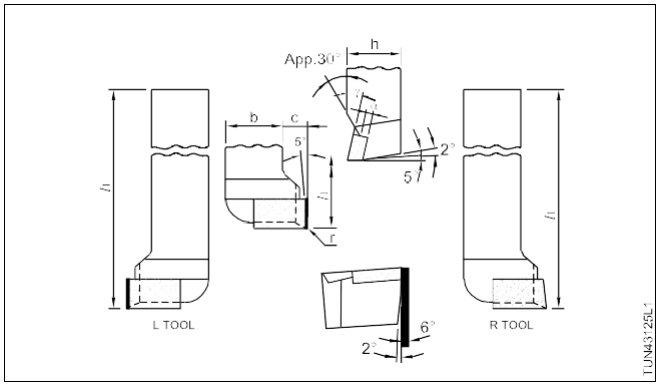
C Tool length

D Cutting direction

Tool Geometry, Insert Type, Nomenclature of inserts

Choose the correct answer

1 Name the tool shown in fig



A parting tool

B Rough turning tool

C facing tool

D Boring tool

2 Inserts tools are made of

A Powder metallurgy

B Molten metal

C Machined from rod

D Sheared from carbide plate

3 Advantage of negative rake angle of tool

A The cutting edge becomes stronger

B Prevent digging of tool

C Operate only on low cutting speed

D The cutting edge become weak

4 The straight edged tool moving with a constant velocity in the direction perpendicular to the work is known as

A Tool geometry

B tool feed

C cutting speed

D depth of cut

5 The approach angle, cutting angle, trailing angle clearance angle, rake angle relates to ?

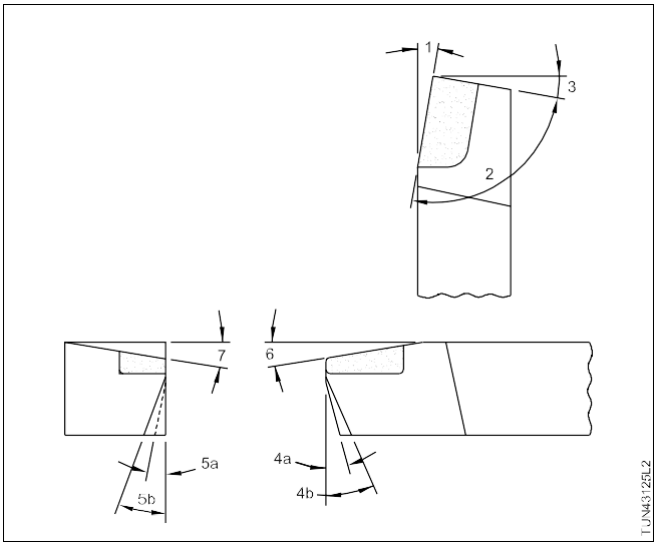
A Tool cutting speed

B Tool efficiency

C Tool life

D Tool geometry

6 Name the angle marked as 'Z' in the Fig shown?



A Approach angle

B Cutting angle

C Top rake - negative

D Side rake

Describe tooling system for turning

Choose the correct answer

1 Which type of tool holder is called cartridges in a throw away tool holder ?

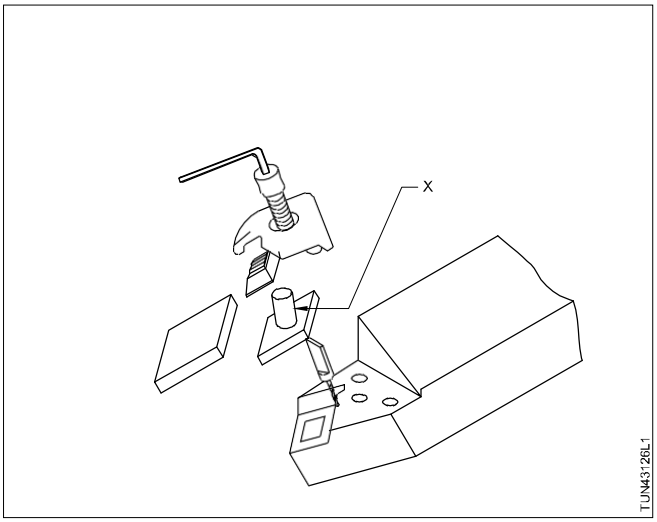
A Internal boring work

B External plain turning

C External threading

D Grooving tool holder

2 What is the name of part marked as 'X' of a throw away tip tool- holder ?



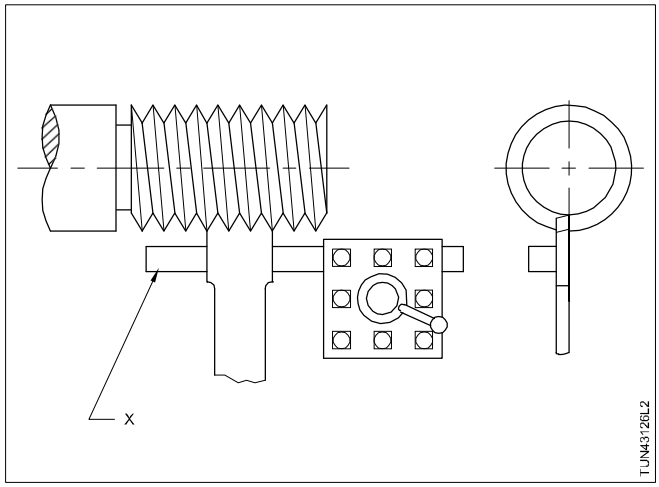
A Clamp

chip breaker

C shim pin

D clamp screw

3 What is the name of the part marked as 'X' in the Fig shown?



A Work piece

B chasing rest

C chaser

D Tool post

4 What is the important point to be noted in the selection of tool holder in throw away tips ?

A Tool holder should have correct size of shape of tool bit

B Tool holder material

C Tool holder length

D Tool bit to be over hang

Setting work and tool offset

Choose the correct answer

1 Why the programmed size is 'X' 40.49 and the machined size is 40.44 in this 0.05 mm is reduced to

A Work offset

B Geometrical offset

C Wear offset

D Tool offset

2 How many type of offset are there in CNC system?

A 2

B 3

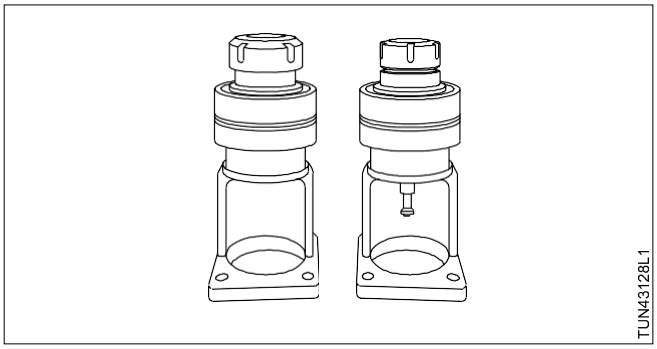
C 4

D 5

Describe tooling system for CNC Turning centers

Choose the correct answer

1 Name the tool shown in the fig?



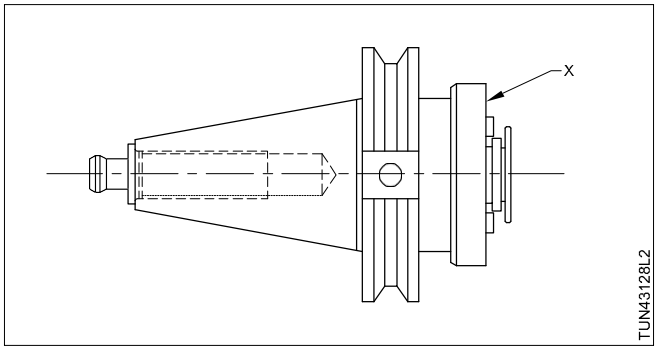
A Tool holder locking fixture

B Tool holder collets

C Screw gauge

D Tool guide

2 Name the part marked as 'X' in the shown Fig ?



A Opposed collar

B Taper shown

C Offset collets

D Adapter

Cutting tool material for CNC turning

Choose the correct answer

1 Presently CNC cutting tool are coated carbide tools, using titanium nitride, titanium carbide and aluminum oxide with a thickness up to

A 10 micron

B 15 micron

C 20 micron

D 25 micron

2 H.S S Tools also used for drilling but the maximum cutting speed in CNC lathe is

A 10 m/min

B 15 m/min

C 60 m/min

D 70 m/min

3 Tool life of a CNC tool (C) = V (T) ^{n} What is n

A Number of cut

B Speed of the spindle

C Taylor exponent

D R.P.M

ISO Nomenclature for Turning tool holder, boring tool holder, Indexable insert

Choose the correct answer

1 In a CNC tool holder selection how many parameter are as compulsory?

A 2

B 1

C 4

D 5

2 Tool holder selection parameter which parameter is decision based, on the part of Geometry ?

A Shank width

B Shank height

C Holder length

D Holder style

3 Tool holder for CNC lathe is designated as S C L C R what does the letter's indicate?

A Insert shop

B Clearance angle

C Clamping method

D style

4 Tool holder for boring Bar for a CNC lathe is designated S 32 u s s what 32 designate U S S?

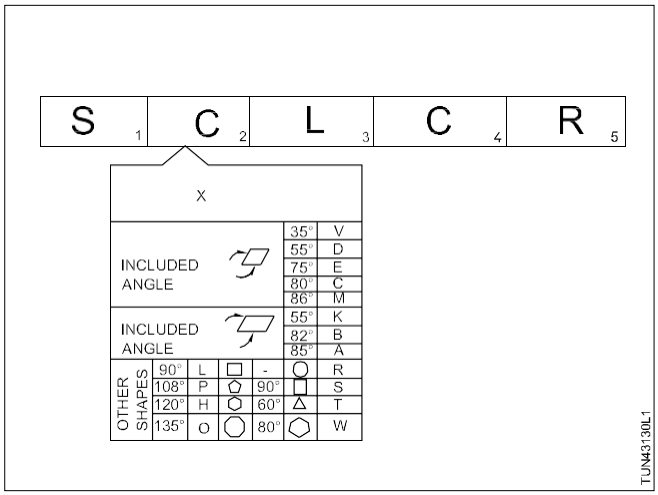
A Clamping method

B Shank dia.

C Tool length

D Shank version

5 Name the part marked as 'X' in the figure shown



A Insert shape

B Clamping method

C Clearance angle

D style

Tool holders and inserts for radial grooving

Choose the correct answer

1 In the CNC lathe boring Bar tool clearance angle is...

A 10°

B 3°

C 5°

D 7°

2 What is the range of included angle of the tool inserts generally?

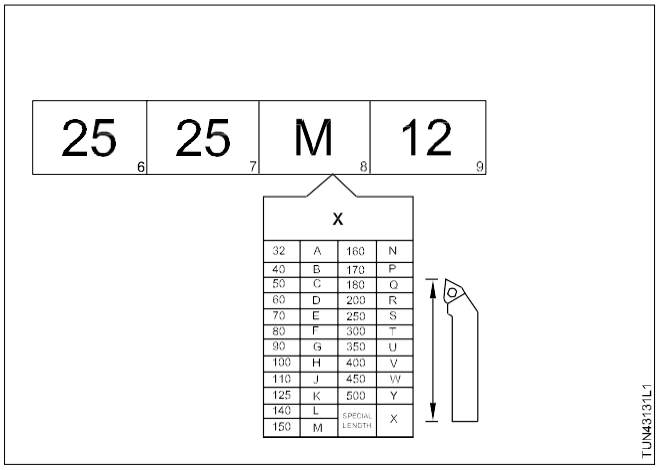
A 55 ° to 85°

B 30° to 45°

C 20° to 40°

D 15° to 20°

3 Name the part marked as 'X' in ISO designation of a lathe tool holder ?



A Shank height

B Shank width

C Shank length

D Tool length

Preparation of Part programming as per drawing

Choose the correct answer

1 Where should the preparatory code appear in a part program structure?

A At the beginning of the format

B At the end of the format

C Immediately after sequence number

D Along with M code word

2 In the structure of a part program, Where should the miscellaneous command code appear?

A Immediately after sequence

No B After coordinate words

C End of the format

D Anywhere in the format

3 What does a block should include in preparing a NC part program ?

A destination of move

B speed, feed

C speed, feed, tooling

D destination of move, speed, feed, tooling

4 When should the "Dry run" executed in a CNC programming?

A Proceeding simulation

B After developing part program

C Following simulation of tool path

D After turning the first component

5 Which is the dimension words used in part programming to represent thread cutting parallel to x,y,z axis ?

A UVW

B PQR

C abc

D ijk

6 In part programming which dimension words represents angular motion to x,y, z

A ovw

B pqr

C abc

D ijk

7 In the preparation of part programming, if the machine uses origin to represent the values ,what system does it follow ?

A Absolute dimensional system

B Incremental dimensional system

C Digital dimensional system

D Polar dimensional system

8 In part programming which dimension words represents position of the tool primary motion ?

A x y z

B uvw

C pqr

D abc

9 Which is the first step in preparing a part program, after identifying the machine tool?

A determine feed, speed

B prepare process sheet

C study part drawing

D develop part program

10 How many digits the miscellaneous and preparatory code function have ?

A Single digit

B double digit

C treble digit

D Four digit

11 How many digits should the feed rate word represents in a part program?

A Single

B double

C Treble

D C Four

Checking using CNC Simulator

Choose the correct answer

1 For training operator, editing, marking X estimate etc, which of the following is useful?

A Encoder

B Demodulator

C Simulator

D Programmer

2 When does a simulation program starts in a CNC machine?

A Program is wrong

B Program is correct

C When a machine is OK

D When control device is OK

3 How a simulation does takes place in a CNC machine?

A by hardware device

B through software

C through mechanical device

D through electronic device

4 What does the simulation process in a CNC machine?

A a planning function

B an implementing function

C a verification activity

D a correcting function

Process and tool selection (CNC)

Choose the correct answer

1 Which factor is not related with tool selection?

A Material used for the job

B Quantity of machining parts

C Specification of tool used

D Quality of the product

2 Which step in tool selection process involves minimum tool changes and shortest cycle time

A Step 4

B Step 5

C Step 6

D Step 7

3 What does the step 4 explain in the process of tool selection?

A type of tool needed

B Machining operation needed

C type of machining needed

D Capabilities of machine

4 Which step involves feed and speeds of the CNC machine?

A step 5

B Step 7

C Step 8

D Step 3

Part Program for Grooving

Choose the correct answer

1 What does the syntax G 75 X 20.0 Z - 37.0 P 500 ϕ 4000 F 0.08; indicates in a part program?

A Peck drilling cycle

B Threading cycle

C Grooving cycle

D Stock removal cycle

2 What is the 'Q' word represent in a canned grooving cycle ?

A Groove diameter

B Groove length

C depth of cut

D Shift value in Z axis

3 In CNC operation, What is the preparatory code used for grooving cycle?

A G 75

B G 76

C G 74

D G 73

4 What should be the syntax programming for grooving operation in a CNC machine ?

A G 76 X _Z _ P_ Q _ F;

B G 74 X _ Z _ P_Q _ F;

C G 75 X _ Z _ P _ Q _ F;

D G 75 X _Z _ U _ W _ F ;

5 In a Fanuc system the grooving cycle is given by G 75 X _ Z _ I_ K_ D_ F; what does the word 'D' stands for ?

A Last groove position in Z axis

B Depth of each cut

C Stepping in Z axis

D Relief amount in the end of cut

6 In Fanuc system grooving cycle, the syntax for grooving program is given by G75 X - I - K - D - F; what does the word K indicates?

A Last groove position in Z axis

B Depth of each cut

C Stepping in Z axis

D Relief amount in the end of cut

Part Program for drilling

Choose the correct answer

1 In a Fanuc system peck drilling cycle syntax was given as G 83 X_ Y _ Z _ R _ Q _ F _ K ; what does the word 'Q' stands for ?

A Depth

B Position of R plane

C Depth of cut for each cutting feed

D Number of repeats

2 In sinumeric system, what is the canned drilling cycle code command?

A G 83

B G 74

C G 75

D G 84

3 In Sinumeric peck drilling cycle, the block format show N 50 cycle 83 (155,150,1,5,0,100,20,0,0,10) what does the figure 155, 150 means ?

A Reaction / reference plane

B safety clearance

C Final drilling depth

D First drilling depth

4 In a Fanuc system peck drilling syntax was G 83 X_ Y _ Z _R_ Q _ F_ K; what does the word 'K' stands for ?

A Depth

B Position of R plane

C Depth of cut for each cutting feed

D Number of repeats

5 In the N 50 cycle 83 syntax was G 83 (155,150,1,5,0,100,20,0,0,1,0) What does 0,0 indicates ?

A Final drilling depth

B Feed rate factor

C Dwell time of start / final depth

D Machining type (chip)

6 In a sinumeric peck drilling cycle G 83 deep hole drilling, how much safety clearance should be given

A 150

B 1

C 5

D 0

Part program for boring

Choose the correct answer

1 In a Fanuc system, syntax for a program was given as G 85 X 60 Y 28 ... R 2 F 120 what does X,Y indicates ?

A Hole position in x axis

B Hole position in y axis

C Hole position in xy axis

D Hole position in r plane

2 In Fanuc system, syntax for a program cycle was given G 99 G 85 X 60 28 Z_15 R 2 F 120 What does G 85 indicates?

A Drilling cycle

B Boring cycle

C Tapping cycle

D Threading cycle

3 In a boring cycle program syntax was stated as G 85 X_ Y_ Z _ R _ F_ K _What is the work 'K' stands for ?

A Position of R plane

B Feed rate

C Number of cycle repetition

D Depth from R plane

Part program for threading

Choose the correct answer

1 Which preparatory code is more flexible and suitable for threading longitudinal, transverse, and tapered thread?

A G 76

B G 92

C G 32

D G 33

2 What does Z in the syntax of G 92 cycle indicates G 92 X _ Z _ F _;

A End position of thread in Z axis

B Threading feed rate (pitch)

C Correct diameter of thread

D Start position of thread

3 What does preparatory G Code 92 indicates ?

A Thread cutting

B Multiple thread cutting cycle

C Variable lead thread cutting

D Single threading cycle

4 What does code G 76 represents?

A Thread cutting

B Multiple thread cutting cycle

C Variable lead thread cutting

D Single threading cycle

5 What is the preparatory code G32 represents in Fanuc system ?

A Thread cutting

B multiple thread cutting cycle

C Variable lead thread cutting

D Single threading cycle

6 What are the codes for threading cycle in Fanuc system?

A G 76/G 92

B G 32/ G 34

C G 73/ G/74

D G 71/ G 72

7 In Fanuc G 92 threading cycle format, given by N 40 G 92 X _ Z_ F _ ; what does 'X' indicates

A End position of thread in Z axis

B Threading feed rate (pitch)

C Co ordinate in longitudinal axis

D Start position of thread

8 Which preparatory code should be selected for taper threading cycle?

A G 32

B G 92

C G 76

D G 33

Programming on CNC Tapping

Choose the correct answer

1 What does M 8 represent in programming of CNC tapping?

A Coolant OFF

B Coolant ON

C Spindle direction

D Tapping RH threads

2 Which code in CNC programming refers tapping cycle ?

A G 72

B G 84

C M 29

D M 08

3 Which G code is used for tapping LH threads with M4 in CNC programming ?

A G 74

B G 84

C G 28

D G 97

4 After tapping is completed, how is the tap controlled for its position back to R plane?

A G 32/G 99

B G 98/ G 99

C G 74/ G 75

D G 90/ G 92

5 In Fanuc tapping cycle syntax was given as G 84 X_ Y _ Z _ R _ P _ F_ K _ ; What does the word P represents ?

A Position of R plane

B No of cycle repetition

C Dwell time

D Depth of tapping from R plane

6 In a tapping cycle the block format indicates G84 X _ Y _ Z _ R _ P _ F_ K _ ; What does the 'K' word means ?

A Position of R plane

B Number of cycle repetition

C Dwell time

D Depth of tapping cycle.

CNC Programme for Grooving (OD/ID)

Choose the correct answer

1 In Fanuc G 75 grooving cycle N 20: G 75 X _ Z_ P_ Q_ R_ ; what Z indicates

A Groove depth

B Last groove position in Z-axis

C Stepping in Z - axis

D Relief amount of end of the cut.

2 Which code is used for grooving cycle?

A G 28

B G 30

C G 75

D G 96

CNC Programming for threading

Choose the correct answer

1 Fanuc single line G 76 Threading cycle G 76 X _ Z_ I _ K_ D _ F _A _ P What Z indicates in the program

A Taper over length

B Position of the end

C Diameter of last threading pass

D Single depth of thread - position

2 Which code is used in threading cycle ?

A G 76

B G 50

C G 80

D G 28

Trouble shooting in CNC machines

Choose the correct answer

1 What are the causes of excessive noise in the pump of CNC system?

A cavitation

B Coupling alignment

C Poor power supply

D Improper ventilation al 5m

2 What is the main cause, that leads to electronic fault in a CNC system?

A Poor earthing

B Loose connection

C Dust particles, corrosion

D Poor supply voltage

3 What is the likely failure when the supply voltage to the CNC motor is very high lasting for few micro seconds?

A Surge

B Sag

C Spike

D Blackout

4 What is the likely failure in CNC system, when there in a power breakdown greater than 2.5 seconds?

A Spike

B Sag

C Surge

D Black out/ brown out

5 What is the main cause of failure in Electrical devices in a CNC system?

A Poor earthing

B Loose connection

C blocked air circulation

D Dust particles in contacts

6 What is the main problem relating to the failure of controls in CNC system?

A Low voltage problem

B Zero return problem

C PLC trouble problem

D Hydraulic system problem

7 What remedial action should be initiated if the CNC machine gets crashed?

A Check up battery

B Check up the noise

C Power down & then backup

D Check all bearing, belts

8 What should be the immediate remedy if the actuator of hydraulic pump is not functioning?

A Clean air path

B Check interlock keys

C check ladder diagram

D check for leak

Factors affecting quality & Productivity

Choose the correct answer

1 What is the main advantage of adopting TPM in a industrial unit?

A Improves quality

B Improves maintainability

C Improves productivity

D Improves profitability

2 What shall be the main benefit of adopting TQM system in a organization?

A Improves profitability

B Improves productivity

C Improves quality

D Improves reliability

3 Which is that quality characteristic that aims at customer satisfaction by way producing what actually customer wants ?

A Quality of conformance

B Quality control

C Quality of design

D Quality of production

4 Which is the latest techniques which aims in overall improvement in quality, safety, transport, time, cleanliness in a unit ?

A Total quality management

B Total productive management

C Total chain management

D 5 S management

5 What manufacturing system should be adopted to achieve customer satisfaction in product / services ?

A Quality control

B Quality of maintenance

C Quality of inspection

D Quality Assurance

6 Which maintenance method is designed to minimize the possibility of an anticipated break down and interruptions in production?

A Preventive

B Productive

C Predictive

D Break - down

7 In which system, we can aim to bring zero defects, zero accident, & zero breakdown?

A TQM

B TPM

C SQC management

D JIT

8 Which type of maintenance, waits until a failure occurs on a machine?

A Preventive

B Predictive

C Routine

D Break - down

Parting off Operation in a CNC

Choose the correct answer

1 Which machine code is used for parting operation in a CNC machine?

A G 72

B G 75

C G 92

D G 74

2 Which is the machine operation in which the tool is plunged deep in to the work, with a fairly thin tools ?

A Turning

B Facing

C grooving

D Parting

3 What are the likely main causes of an accident in parting operation?

A Low feed rate

B Tool quality

C Tool not set to exact centre

D Not using coolant

4 In a parting off cycle program syntax G 75 X - P - F What does 'P' indicates ?

A Retraction in X'

B Depth of cut in x'

C Feed rate

D Speed of spindle

5 In a parting off peck cycle syntax G 75 X _ Z_ P _ Q_ F What does Q & Z indicates?

A Groove is lesser in width

B Groove is wider than tool width

C Groove width is same.

D Tool retracts in grooving

6 In G 75 grooving cycle X _ Z _ P _ Q _ R_ F What does the word 'Q' indicates ?

A Relief

B Groove length

C groove depth

D Shift valve in 'Z axis

Bar Feeding System through Bar Feeder

Choose the correct answer

1 What system the bar feeder uses for clamping the work?

A Pneumatic

B Hydraulic

C Electric

D Electronic

2 What is the latest system adopted in feeding stock automatically using sensors?

A Turret cam feeder

B Bar feeder

C Hydraulic feeder

D Pneumatic feeder

3 What is the additional special device employed in a bar feeding system?

A Booster

B Electric motor

C compressor

D Prime mover

Input and Output of data

Choose the correct answer

1 Select Edit modes, press menu key several times than press soft key (PITCH) press (OPRT) (OUTPUT) execute is for the function of....

A Out putting custom macro variable

B Outputting pitch error compensation

C Outputting tool compensation

D Outputting part program

2 In Fanuc system the data display used key 0102 what does the set value 5 indicated as input / Output device

A RS 232 C (uses control code DCI to DC4)

B Fanuc castle adopter

C Portable Tape reader

D Program file FA cord adopter.

3 Selecting (EDIT) mode, turn off (Key - 1) press function key then soft keys (OFFSET) (OPRT) (INPUT) (EXEC) is the execution of operation for ?

A In putting part program

B In putting customer macro variable

C In putting pitch error compensation

D In putting tool compensation

4 Selecting EDIT mode (Parameter code =1) on setting screen press key (PITCH) (OPRT) (INPUT) & exec then reset "Para meter write 1 to 0 " is the procedure for executing ?

A Inputting CNC Para meter

B In putting pitch error compensation

C In putting custom mean variable

D In putting tool compensation

5 Select MDI mode, select 3202 NE9, EDIT press (Program) then press (OPRT), given input program number press (Output) & (Exec) is the operation procedure for.....

A Outputting tool compensation

B Outputting custom macro variable

C Outputting pitch error comprisals

D Outputting part program

6 Press function key / soft key (Setting) confirm para meter. Write = 1 on the screen select (parameter) press keys (OPRT) (INPUT) (Exec) is the operation procedures for....

A outputting part program

B Inputting CNC parameter

C Inputting pitch error compensation

D Inputting custom macro variable

7 Selecting EDIT, press key (OFFSET) press (OPRT) than (Output), (Exec) is meant to carryout the operation of...

A Pitch error compensation

B Outputting custom macro variable

C Outputting tool compensation

D Outputting part program

8 Process function key, continuous menu key than soft key (Macro), press (OPRT) and then press (Output) (Exec) is meant for the operation. ?

A Pitch error compensation

B tool compensation

C outputting custom macro variable

D Output part program

9 In selection of I/O channel 0020 which number indicates the memory card interface ?

A 1

B 2

C 4

D 5

10 Selecting EDIT, confirm parameter write press function key, menu key than press soft key (PITCH) then press keys (OPRT) (INPUT) (Exec) is the executing procedure for...?

A In putting CNC parameter

B In putting pitch error compensation

C In putting custom macro variable

D In putting tool compensation

11 In Fanuc system, under the I/O system 0139 what does the key # represent ?

A Output with EIA code

B Output with ISO code

C ASC put / input/ output

D ISO code input / output

12 In selection I/O channel the number 5 indicates inder selection of channel (0020)

A Channel / Rs 232

B Memory card interface

C Data service inter face

D Channel 2 serial port

Heat Treatment – meaning & procedure hardening, tempering, carburizing

Choose the correct answer

1. The purpose of normalizing steel is to
(a) soften the steel
(b) Increase the toughness and reduce brittleness
(c) Improve the machinability
(d) Remove induced stresses

2. Case hardening is a method of producing hard skin on the surface of
(a) cast iron (b) low carbon steel (c) alloy steel (d) high carbon steel

3. A carbon steel piece is heated just above 730°C maintained at that temperature for a few hours and then slowly cooled. What heat treatment process is carried out?
(a) Normalizing (b) Annealing (c) Hardening (d) casehardening

4. To reduce internal stresses of a hardened tool, the method of heat treatment generally applied is
(a) Tempering (b) Annealing (c) Normalizing `(d) Stabilizing

5. A given component cracked after heat treatment. What can be the possible reason?
(a) It was heated for long time
(b) It was not properly cleaned before heating
(c) It was suddenly cooled in brine
(d) It was slowly cooled in air

6. Heat treatment of metals is necessary
(a) To make good appearance on the component
(b) To increase strength of the metal
(c) To produce certain desired properties
(d) To make the metal rust proof

7. The toughness in a Steel is increased and brittleness is decreased by a heat treatment operation called as
(a) Tempering (b) Annealing
(c) Normalizing (d) Case hardening

8. In case hardening process, ammonia gas is introduced on steel; the process is known as
(a) Nitriding (b) Cyaniding
(c) Carburizing (d) Ammonizing

9. After heating up to required hardening temperature, why must tool steels be quenched?
(a) To return it to its original structure
(b) To fall off the scale
(c) To build up hardening structure
(d) To induce internal stresses

10. A punch is made out of unalloyed steel. After hardening a crack take place. What can be reason to develop this crack?
(a) The punch is suddenly quenched (b) The punch is too long heated
(c) The punch is too slowly quenched (d) The punch too little heated

11. Cyaniding" and "Nitriding " are two method of
(a) Hardening (b) Case hardening (c) Tempering (d) Normalizing

12. The external surface of the part made of mild steel can be hardened by
(a) Normalizing (b) Tempering (c) Casehardening
(d) Hardening

13. In nitriding process the NH_3 gas is introduced at
(a) 500°C to 560°C (b) 600°C to 650°C (c) 650°C to 700°C (d) 575°C to 600°C

14. H.S.S is tempered at
(a) 220°C to 230°C (b) 230°C to 270°C (c) 280°C to 400°C (d) 550°C to 600°C

15. The instrument used to measure high temperature in the furnace is
(a) Thermometer (b) Pyrometer (c) Barometer
(d) Colorimeter

16. Which one of the following processes is used for hardening the surface of tool steel?
(a) Hardening (b) Induction hardening (c) Cyaniding
(d) Carburizing

17. Lower critical temperature of high carbon steel while hardening is
(a) 900°C (b) 950°C (c) 723°C (d) 735°C

18. The process of increasing carbon percentage on the surface of low carbon steel is known as
(a) Hardening (b) Carburizing (c) Nitriding
(d) Tempering

19. The process of producing a component with tough and ductile core and a hard outer surface is known as
(a) Case hardening (b) Annealing (c) Tempering (d) Hardening

20. While normalizing the steel should be cooled
(a) In still air to room temperature (b) In oil
(c) By forced air (d) In water

21. Which one of the following is the purpose of tempering a hardened steel component?
(a) To increase hardness (b) To increase ductility
(c) To increase toughness (d) To reduce hardness

22. What is the hardening temperature for H.S.S tool?
(a) 1250°C (b) 950°C (c) 850°C (d) 723°C

23. Which one of the following quenching media is used for hardening H.S.S tool?

(a) Brine solution (b) Oil (c) Water (d) Soda water

24. Which one of the following is the solid carburizing material?

(a) Kerosene (b) Petrol (c) Ammonia (d) Charcoal

25. During heat treatment when carbon is dissolved to form solid solution, it is known as

(a) Ferrite (b) Cementite (c) Austenite (d) Pearlite

26. Which one of the following structures of steel is obtained due to the drastic cooling from the austenite structure?

(a) Troostite (b) Matensite

(c) Cementite (d) Pearlite

27. Which one of the following processes by which steel is heated to the required temperature and then cooled slowly in the furnace itself?

(a) Annealing (b) Nitriding

(c) Tempering (d) hardening

28. What is the main purpose of annealing?

(a) To improve the machinability (b) To improve magnetism

(c) To increase hardness

(d) To increase toughness

29. One component of C50 steel is heated to 830°C, soaked at it for some time and then quenched in oil. Again it is heated to 600°C and quenched in oil. Name this process of heat treatment.

(a) Annealing (b) Hardening & tempering (c) Normalizing (d) Casehardening

30. For best result of annealing the heated steel piece is cooled

(a) Slowly in the furnace itself by switching off the heat supply

(b) By removing the piece from the furnace and allowing it to cool in open air

(c) By removing the piece from the furnace and dipping it in a tank containing water

(d) Be removing the piece from the furnace and placing it under a blast of air

31. The process of heating steel to about 40°C above the upper critical temperature and cooling it in still air to room temperature is known as

(a) Annealing (b) Hardening

(c) Normalizing (d) Casehardening

32. Which one of the following heat treatment processes produces scale free surface on the component?

(a) Flame hardening (b) Induction hardening

(c) Case hardening (d) Nitriding

33. In heat treatment process annealing is done to

(a) Increase the toughness

(b) Increase the softness

(c) Increase the hardness

(d) Increase the brittleness

34. After hardening process, the metal becomes more hardened and also will become more

(a) Brittle b) Ductile

(c) Malleable (d) Tough

35. For case hardening the first stage is carburizing. By carburizing It is meant

(a) Increase the percentage of carbon of the steel piece

(b) Increase the percentage of carbon of the core of the piece

(c) Increase the percentage of carbon on the surface

(d) Decreasing the percentage of carbon of the steel piece

36. For annealing hypo-eutectoid steel according to the carbon content, it should be heated to

(a) 30°C to 50°C above the lower critical temperature (b) 30°C to 50°C above the above critical temperature

(c) 600°C to 630°C

(d) 1000°C to 1030°C

37. Approximate hardness of HSS milling cutter is

(a) 45 HRC (b) 52 HRC (c) 62 HRC (d) 75 HRC

38. Which one of the following groups of quenching media is in order of their severity of the cooling rate, i.e. from slow to rapid cooling?

(a) Oil, forced air, brine solution (b) Forced air, oil, brine solution

(c) Brine solution, oil, forced air (d) Forced air, brine solution, oil

38. Which one of the following processes is adopted to improve the internal structure of steel, which has been subjected to severe hammering?

(a) Hardening (b) Annealing (c) Normalizing (d) Tempering

39. While hardening, after heating the steel to the required temperature it is held at that temperature are soaking time for normal

(a) 5 minutes per 10 mm thickness (b) 10 minutes per 5 mm thickness

(c) 2 minutes per 20 mm thickness (d) 20 minutes per 2mm thickness

40. Liquid carburizing is done in a heated salt bath, which one of the following is not a carburizing salt?

(a) Sodium carbonate (b) Sodium sulphate

(c) Sodium cyanide

(d) Barium chloride

41. The lower critical temperature of high carbon steel is_____ (a) 900°C

(b) 960°C (c)560°C (d) 723°C

42. Meaning of annealing is _____

(a) To bring the metal in soft condition (b) To make the metal hard

(c) To make the metal good (d) To correct the metal structure.

43. In H.S.S hardening, the soft materials make to red hot then put those for cooling in

(a)Oil (b) Air (c) Water (d) Cow slag

44. What is tempering _____

(a) To minimize brittleness and increase the toughness of metal

(b) Hardening of cutting edge

(c) Checking of cutting edge with template

(d) Sharpening of cutting edge

45. Heating of carbon steel in furnace at 730°C and then cooling it in that furnace is called
(a) Case hardening (b) Hardening
(c) Tempering (d) Annealing
46. High strength nut and bolt make to _____
(a) Hard (b) Case hard
(c) Temper (d) Nitride
47. Case hardening is done on _____
(a) Cast iron (b) High carbon steel
(c) High speed steel (d) Mild steel
48. To remove the higher brittleness of chisel_____
(a) Tempering (b) Annealing (c) Hardening (d) Carburizing

49. Carbon steel temper at _____
(a) 200°C to 300°C (b) 100°C to 150°C
(c) 550°C to 600°C (d) 400°C to 500°C
50. To get the desired property of steel by heating and cooling process
(a) Normalizing (b) Hardening (c) Heat treatment (d) Tempering
51. Annealing is done for
(a) To increase the machining properties
(b) To increase the hardness
(c) To increase the toughness
(c) To reduce distortion
52. Heating at proper temperature according to steel quantity then cooling at room temperature, this process is called
(a) Annealing (b) Normalizing (c) Hardening (d) Tempering
53. Which one is having combine state of carbon in carbon or iron alloy
(a) Steel (b) Wrought iron
(c) Pig iron (d) Cast iron
54. Name of the process having fine grains structure and mechanical properties
(a) Annealing (b) Tempering (c) Normalizing (d) Austenite
55. It is a chemical combination of iron and carbon
(a) Ferrite (b) Cementite
(c) Austenite (d) Pearlite
56. Steel having 0.83% carbon contents has _____
(a) Hardness (b) Strength
(c)Malleability (d) Ductility
57. It is a liquid of gamma iron and carbon_____
(a) Ferrite (b) Cementite
(c) Austenite (d) pearlite
58. A laminated structure made on mixing of ferrite and cementite is called
(a) Alloy steel (b) Mantensite (c) Austenite (d) Pearlite
59.The steel which has 0.83% of carbon, it increases the _____of steel (a) Hardness
(b) Strength (c) Malleability (d) Ductility
60. In eutectoid or pearlite steel percentage of carbon is
(a) 0.84% (b) More than 0.84% (c) Less than 0.84% (d) None of the above
61. How much carbon percentage of FERRITE steel and pig iron?
a) 0.84% (b) More than 0.84% (c) Less than 0.84% (d) 0%
62. Find out the odd one in annealing processes.
(a) To relieve strain and stress (b) To eliminate strain and hardness
(c) To hardened the steel (d) To improve the machinability
63. Which cooling substance not used in hardening process
(a) air (b) Chlorine (c) Brine (d) Water
64. Which one of the not related aims of tempering?
(a) To restore some ductility (b) To increase the brittleness
(c) To induce shock resistance (d) To relieve the internal stresses
65. Which of the following is the hardest constituent of steel .
(a) Ferrite (b) Austenite (c) Martensite (d) Bainite
66. Upon annealing, eutectoid steel converts to which of the following?
(a) Pearlite (b) Cementite (c) Austenite (d) Martensite
67. Mild steel can be converted into high carbon steel by which of the following heat treatment process?
(a) Annealing (b) Normalizing (c) Case hardening (d) Nitriding
68. In normalizing, cooling is done in which of the following medium?
(a) Air (b) Water (c) Oil
(d) Furnace
69. In annealing, cooling is done in which of the following medium?
(a) Air (b) Water (c) Oil
(d) Furnace
70. For steel, Which one of the following properties can be enhanced upon annealing?
(a) Hardness (b) Toughness (c) Ductility
(d) Resilience
71. Which one of the purpose not related to annealing of steel?
(a) To soften the steel (b) To improve the machinability
(c) To decrease the ductility (d) To relieve the internal stresses
72. Which one of the not used quenching media?
(a) Brine solution (b) Water
(c) Oil (d) Chlorine
73. Which cooling medium gives a faster rate of cooling while air cooling has the slowest rate of cooling.
(a) Brine solution (b) Water
(c) Oil (d) Chlorine
74. Which cooling medium related to sodium chloride.
(a) Brine solution (b) Water
(c) Oil (d) Chlorine
75. Which type of cooling medium gives sever quenching because it has a higher boiling point than pure water.
(a) Water (b) Brine solution
(c) Oil (d) Chlorine
76. Find out the cooling medium very commonly used for plain carbon steels.
(a) Brine solution (b) Oil (c)

Water (d) Chlorine
77. Find out the cooling medium very commonly used for alloy steels.
(a) Brine solution (b) Oil
(c) Water (d) Chlorine
78. Find out the cooling medium very commonly used for special alloy steels.
(a) Air (b) Water
(c) Oil (d) Furnace
79. Steel should be heated at low temperature up to 600°C as slowly as possible called as
(a) Quenching (b) Soaking time (c) Heating steel (d) Preheating
80. After induction hardening of the work pieces, stress relieving is necessary, Find out the odd one.
(a) The depth of hardening, distribution in width and the temperature are easily controllable.
(b) The time required and distortion due to hardening are very small.
(c) The surface remains free from scales.
(d) This type of hardening not easily be incorporate in mass production
81. In process of hardening the percentage of carbon.
(a) 0.4% (b) above 0.4% (c) below 0.4%
(d) None of the above
82. In process of hardening the temperature of
(a) 30 to 50°C above critical temperature
(b)30 to 50°C below critical temperature
(c) Below the 723°C temperature
(d) None of the above
83. In tempering process turning tool required to temperature and colour is
(a) 240°c and dark straw (b) 230°C and pale straw
(c) 250° and brown (d) 260°C and reddish brown
84. In tempering process drills and milling cutters tool required to temperature and colour is
(a) 240°c and dark straw (b) 230°C and pale straw
(c) 250° and brown (d) 260°C and reddish brown
85. In tempering process Taps and shear blades required to temperature and colour is
(a) 240°c and dark straw (b) 230°C and pale straw
(c) 250° and brown (d) 260°C and reddish brown
86. In tempering process punches, reamers, twist drills required to temperature and colour is
(a) 240°c and dark straw (b) 230°C and pale straw
(c) 250° and brown (d) 260°C and reddish brown
87. In tempering process rivets and snaps required to temperature and colour is
(a) 290°C and light blue (b) 300°C and dark blue
(c) 320°C and very dark blue (d) 270°C and brown purple
88. In tempering process press tools and cold chisels required to temperature and colour is
(a) 290°C and light blue (b) 280°C and dark purple
(c) 320°C and very dark blue (d) 270°C and brown purple
89. In tempering process cold set for cutting steels required to temperature and colour is
(a) 290°C and light blue (b) 300°C and dark blue
(c) 320°C and very dark blue (d) 270°C and brown purple
90. In tempering process springs, screw drivers required to temperature and colour is
(a) 300°C and dark blue (b) 320°C and very dark blue
(c) 340°C and grayish blue (d) all of the above
91. Which type of liquid form used salt bath in liquid carburizing process
(a) Sodium carbonate (b) Sodium cyanide (c) Barium chloride (d) all of the above
92. Find out one of the odd substance which not related to pack carburizing process
(a) wood (b) paper (c) leather (d) charcoal
93. Find out the energizer used in pack carburizing process
(a) Sodium carbonate (b) Sodium cyanide (c) Barium carbonate (d) All of the above
94. Which type of gas used in Gas Carburizing
(a) Methane (b) Propane (c) Both a &b (d) Hydrogen
95. After carburizing has been done, the case will contain about _____ percentage of carbon
(a) 0.09% (b) 0.9% (c) 0.15% (d) both b &c
96. How much temperature required for relieve quenching stresses in tempering?
(a) 200°C (b) 220°C (c) 240°C (d) 210°C
97. How much temperature required for gas nitriding process.
(a) 500°C (b) 520°C (c) 540°C (d) 600°C
98. Which gas required for the gas nitriding process.
(a) Hydrogen gas (b) Oxygen gas (c) Ammonia gas (d) methane
99. How much temperature required for salt bath nitriding process.
(a) 620 - 670°C (b) 520 – 570°C (c) 720 - 750°C
(d) None of the above
100. In salt bath nitriding process the completely stress relieved work pieces are pre heated temperature about
(a) 460C (b) 590C (c) 675C
(d) None of the above

101. What is the name of steel structure with 0% carbon which is soft and ductile

A Ferrite

B Cementite C

Pearlite

D Austenite

102. Which steel structure is very hard and brittle but not strong ?

A Ferrite

B Pearlite

C Cementite

D Austenite

103. What is the temperature at which change in structure commences and the new structure formed ?

A 723 ° C

B 780° C

C 710° C

D 719° C

104. Which structure of steel formed when hot steel cooled rapidly?

A Ferrite

B Martensite

C Cementite

D Pearlite

105. What is the benefit of hardening? A Increase toughness

B Increase wear resistance

C Increase Brittleness

D Increase shock resistance

106. Which property of metal induces toughness and shock resistance ?

A Tempering

B Hardening

C Normalizing

D Annealing

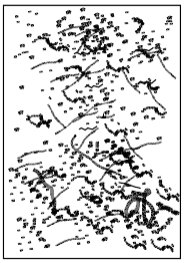
107. What is the property of normalizing ? A Refine the grain structure

B improve machinability

C Increase toughness

D Induce hardness

108. Identify the steel structure



TUN46149L1

A Martensite

B Ferrite

C Pearlite

D Clementine

109. What is the purpose of annealing? A To soften the steel

B To harden the steel

C To refine the grain structure

D To add cutting ability

110. Which heat treatment process involves reheating the hardened steel to a temperature below 400° C following by cooling?

A Hardening

B Tempering

C Normalizing

D Annealing

111. Which process of heat treatment involves heating the steel above critical range and soaking it for sufficient time and cooling it very slowly within the furnace?

A Hardening

B tempering

C Annealing

D case hardening

112. Which heat treatment process, the heated job is held in the same temperature for a period of time and allow the heating to take place throughout the section uniformly?

A Preheating

B Soaking

C Quenching

D case hardening

113. Which has faster rate of cooling media followed in heat treatment process?

A oil

B air

C water

D brine solution

114. Which factor affects the soaking time in heat treatment process ?

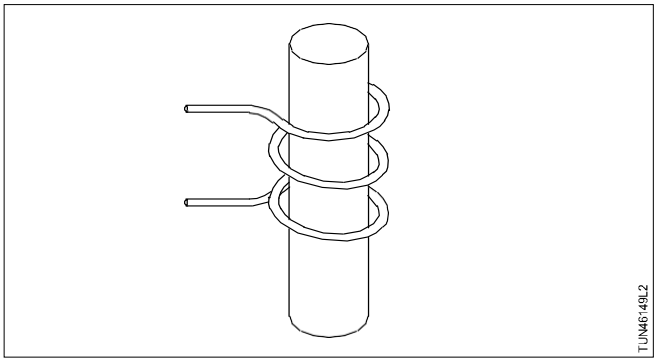
A Cross section of the steel

B Quenching media

C Type of material

D Structure of the steel.

115. Identify the type of hardening method used in heat treatment ?



A Pack carburizing

B Induction hardening

C Liquid carburizing

D Gas carburizing

116. Which process of heat treatment uses barium carbonate as an energizer?

A Liquid carburizing

B pack carburizing

C Gas carburizing

D Nitriding

117. What is the gas used in gas carburizing method ?

A Carbon monoxide

B Methane gas

C Ammonium carbide

D Sodium carbonate

118. Which heat treatment method of carburizing steel is suitable for batch production?

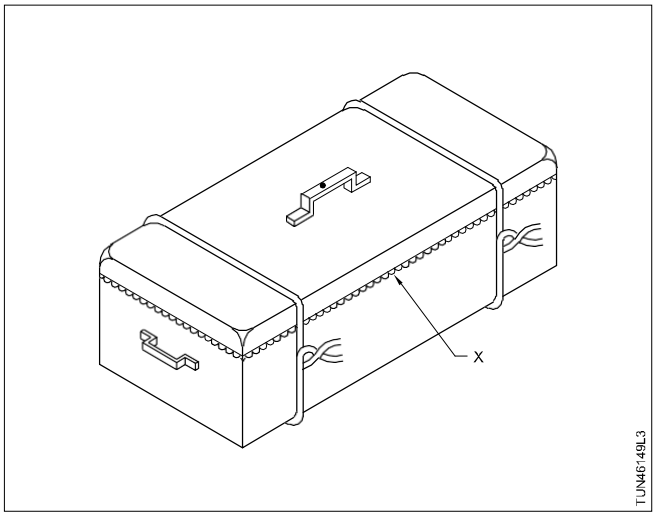
A Induction hardening

B Pack carburizing

C Liquid carburizing

D Gas carburizing

119. Identify the part marked as 'X' in the pack carburizing



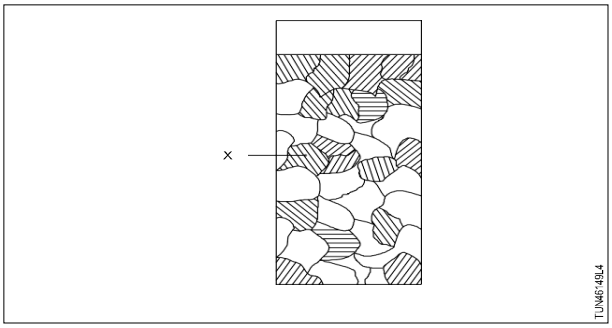
A Metal box

B Lid

C Fire clay

D wire

120. Identify the structure marked as ‘X’ in the fig



A Martensite

B Pearlite

C Ferrite

D Austenite

121. What is the main advantage of nitriding process ?

A Warping and distortion does not occur B Provide good surface finish

C Suitable for batch production

D Provide reasonable toughness

122. What is the layer of thickness that is formed on the surface in nitriding salt bath process?

A 0.03 to 0.09 mm

B 0.01 to 0.02 mm

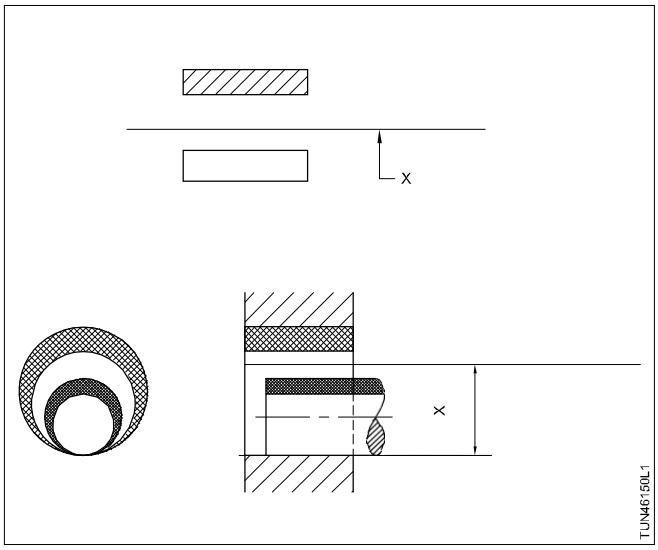
C 0.02 to 0.23 mm

D 0.02 to 0.18 mm

Interchangeability meaning, procedure for adoption, quality control procedure

Choose the correct answer

1 Identify the part marked as “X” in the fit limits terminology



A Tolerance

B Basic size

C Upper deviation

D Lower deviation

2 What is the name of algebric difference between maximum limit and basic size of component?

A Actual size

B Upper deviation

C Lower deviation

D Actual deviation

3 What is the name of the algebric difference between minimum limit of size and its corresponding basic size

A Upper deviation

B Lower deviation

C Actual deviation

D Fundamental deviation

4 How many fundamental deviations are available in BIS system ?

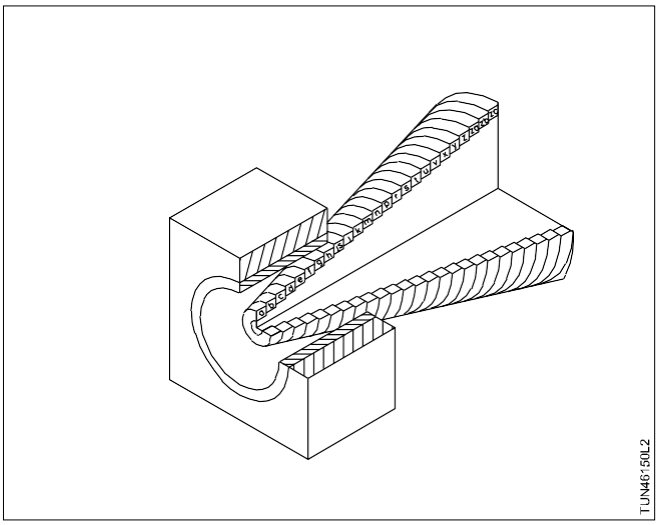
A 18

B 20

C 25

D 28

5 Identify the system used in fits terminology?



A Shaft basis system

B Hole basis system

C BIS system

D Fundamental deviation

6 How many grade of tolerance is available in BIS system ?

A 25

B 20

C 18

D 24

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

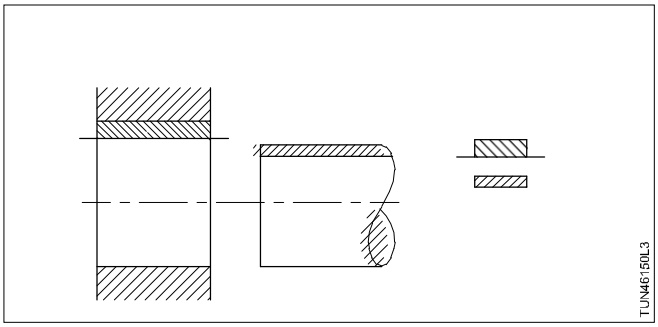
A Deviation

B Tolerance

C Allowance

D Clearance

8 Identify the type of fit



A Clearance fit

B Interference fit

C Transition fit

D shrinkage fit

9 What is the name of fit if the tolerance zone of hole is below the tolerance zone of shaft ?

A Clearance fit

B Transition fit

C Interference fit

D Sliding fit

10 Which type of fit will provide the tolerance zones of hole and shaft will overlap each other

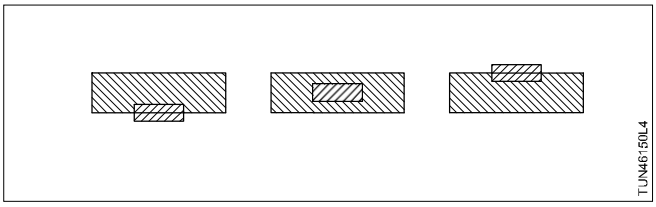
A Clearance fit

B Interference fit

C shrinkage

D Transition fit

11 Identify the type of fit



A Clearance fit

B Interference fit

C Transition fit

D Sliding fit

12 Which factor determine the hole basis system in limits and fits terminology ?

A Hole size constant shaft size varying

B staff size constant hole size varying

C Both hole and shaft size constant

D Both hole and shaft size varying

13 Which type of inspection is carried out to check raw materials or components

A Pre production inspection

B During production inspection

C Final inspection

D post production inspection

14 What type of inspection is done after 10- 30 % of the product are finished ?

A Pre production inspection

B During production inspection

C Final inspection

D record inspection

15 The conformance of the real use with the product specification is the first step of ...

A Quality control

B Production

C Rejection

D Designing

16 The correspondence between the product specification and the technical specification is known as ?

A Second quality step

B First quality step

C Third quality step

D Product specification

17 How many type of inspection are carried out in different level of production

A 6

B 10

C 12

D 4

18 How much percentage of acceptance quality limit for major defect and minor defects are allowed ?

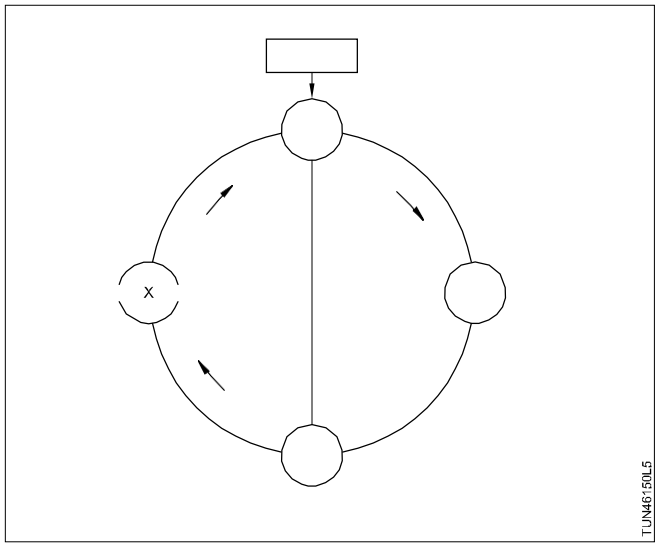
A 7 % to 12 %

B 5 % to 10 %

C 2.5 % to 4 %

D 25 % to 40 %

19 Mark the part mark the x in shown figure



A Purchase of material

B Production

C User

D Marketing product specification

20 When a component machined the cutting tool leaves certain lines or patterns on the work surface is known as

A Surface hardness

B Surface texture

C Surface softness

D Surface hardness calve

21 What R_a Valve of surface roughness can be achieved in flame cutting, hacksaw cutting band saw cutting, shot blasting process ?

A 25

B 1.6

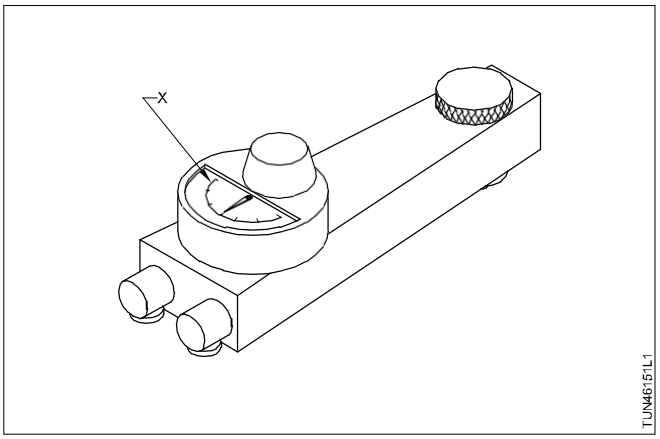
C 3.2

D 50

Surface texture measuring instruments

Choose the correct answer

1 What is the name of part marked 'X' in the mechanical surface indicator



A Measuring stylus

B Skids

C Indicator scale

D Adjustment screw

2 Manufacturer states to use preventive inspection where in measures were to be taken to reduce the rejection to almost zero is called

A Quality control

B Production

C Rejection

D designing

3 Taly-surf electronic instruments used for measuring?

A Waviness

B Roughness

C hardness

D toughness

4 Name the process which improves geometrical accuracy and refine surface finish ?

A Drilling

B Tapping

C grinding

D Lapping

5 What will be the effect it lap is harder than work piece ?

A Work piece will get charged

B Lap will cut the work piece

C Develop the accuracies

D provide smooth lapping operation

6 What is the advantage of lapping vehicles?

A Provide good surface finish

B Assists concentration of abrasives an surface

C Regulate the cutting action

D Increase the cutting efficiency

7 Which lapping material is preferred if excessive lapping allowance is required?

A cast iron

B copper

C Mild steel

D grey cast iron

8 Which lapping abrasive is preferred for heavy stock removal?

A Silicon carbide

B Aluminium oxide

C Boron carbide

D Diamond

9 Which lapping abrasive provide high quality finish?

A Silicon carbide

B Aluminum oxide

C Boron carbide

D Diamond

10 Which lapping material is used for lapping holes

A Lead

B Copper

C Cast iron

D Brass

11 What is the purpose of using abrasive diamond?

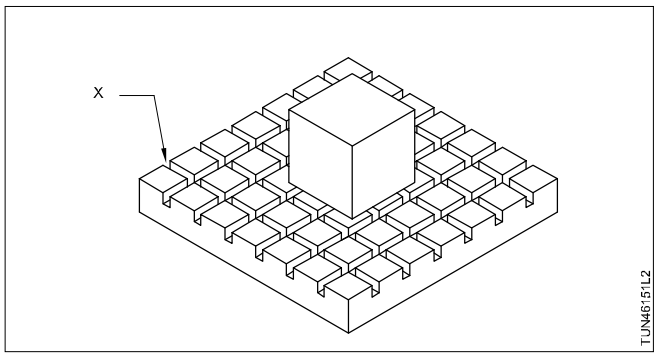
A Lapping tungsten carbide

B Lapping hardened steel

C Lapping for quality finish

D Lapping dies and gauges

12 Identify the x marked part in lapping operation mark 'x' on grooves



A Lapping plate

B Component

C Lapping paste

D Grooves

13 What is the effect of excessive application of the abrasive compound?

A Develop inaccuracies

B Provide good surface finish

C Provide smooth movement

D Provide better accuracy

14 What is the special device used to guide the cutting tool and hold the job for operation?

A Fixture

B JIG

C coupler

D Template

15 What is the mechanism used to regulate the tension between belt/ chain or driver / follower and maintains direction of rotation ?

A Controller

B journal

C Idler

D Fastener

16 What is an epicycle gearing system which includes an outering gear, is called as?

A Herringbone gear

B Spiral gear

C Planetary gear

D Bevel gear

17 What is the cylindrical flat bottomed hole, which enlarges the diameter of an existing pilot hole?

A Bore

B Counter bore

C Counter sink

D Counter shoulder

18 What do you call a mechanical device that is used to permit motion in one direction only ?

A Plummer

B Fixture

C Racket

D Ratchet

19 What is the distance of a point from the origin of a coordinate system measured parallel to mutually perpendicular axis, called as ?

A Perspective coordinates

B Reference coordinates

C Incremental coordinate

D Absolute coordinate

20 What is the origin of the coordinate measuring system of the machine is known as ?

A Work zero

B Tool zero

C Machine zero

D Reference zero

21 What do you call the velocity of a cutting edge of a tool relative to the work piece?

A Cutter offset

B Cutter tolerance

C cutting speed

D Cutter geometry

22 What is the expansion of ISO ?

A Indian Standards organization

B International standards Organization

C International Organisation for Standardization

D International Safety Organization

23 What do you call, a pause of programmed duration, usually to ensure that a cutting action has time to be completed?

A Baffle

B Backlash

C Domain

D Dwell

Importance of Technical term used in Industry

Choose the correct answer

1 What is the document that provides complete details for a specific job with regard to labour employed, machine utilization?

A Production cycle format

B Productivity report

C Job card report

D Batch production report

2 What is the name of the chart, used for all operations in the manufacturing process, represented graphically ?

A Production chart

B Control chart

C Process flow chart

D Multiple activity chart

3 What is the quality system management that enables on industry to improve its quality of product or services ?

A TQM Total quality management

B TPM total productive management

C Preventive maintenance management

D Cost control management

4 Which Quality system management on implementation leads to higher productivity in an organization?

A Total quality management

B Statistical quality management

C Human resource management

D Total productive management

5 Which device consist of an eccentric or mult curved wheel mounted on a rotating shaft produce variable motion ?

A Broach

B Bushing

C Casting

D cam

6 What is the type of maintenance in which machineries are systematically & periodically checked to eliminate a likely failure?

A Routine maintenance

B Preventive maintenance

C Predictive maintenance

D Autonomous maintenance

7 What is the type of maintenance in which the operator himself look after routine checkup of his machine, & specially trained for this purpose ?

A Preventive maintenance

B Breakdown maintenance

C Autonomous maintenance

D Predictive maintenance

8 What is the document meant to measure the efficiency of a person, machine, factory system?

A Batch processing record

B Production cycle record

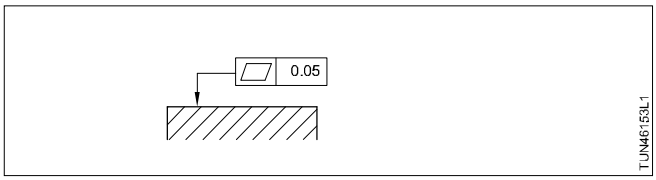
C Productivity report

D Manufacturing inspection report

Terms used in part drawings and Geometrical tolerances and symbols

Choose the correct answer

1 Identify the geometrical tolerance on surface



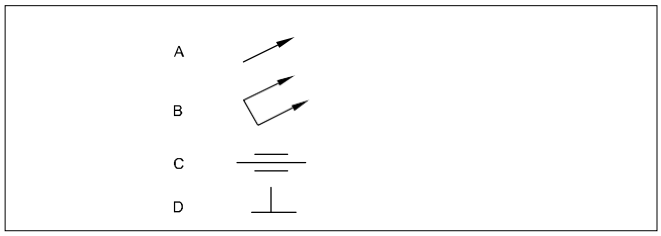
A Flatness

B Curved surface

C Squareness

D Angularity

2 Which symbol indicate total run out in geometrical tolerance



3 Which class of geometric tolerance indicate concentricity ?

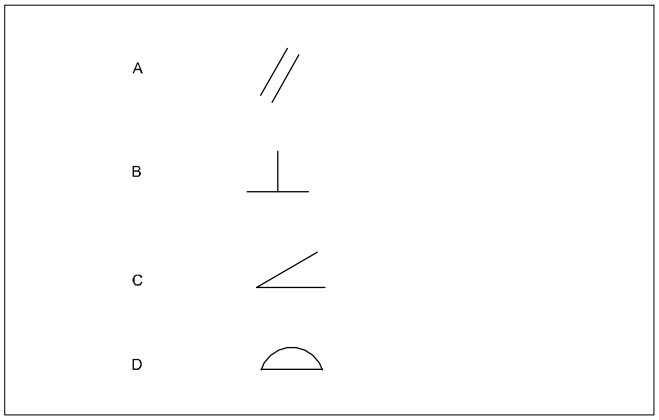
A Location

B Run out

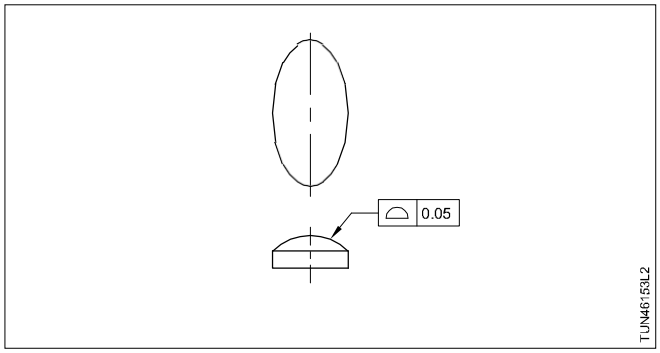
C Profile

D Orientation

4 What is the characteristic symbol of tolerance related to for squareness ?



5 Name the symbol of tolerance to the surface.



A to a curved surface

B to a convex surface

C to a concave surface

D to a taper surface

6 What is the reason for using geometrical tolerance?

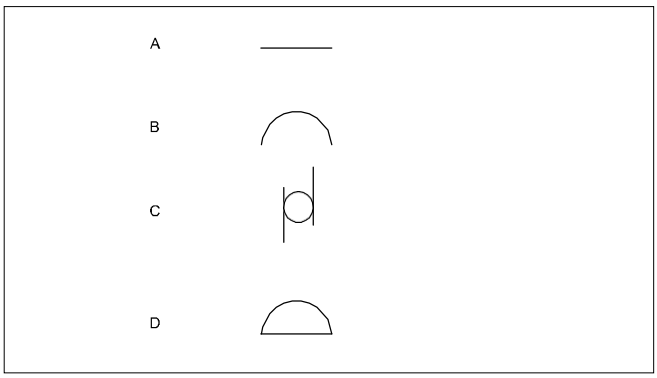
A Produce component precisely

B Set the clearance limit

C Indicate the tolerance zone

D Indicate the permissible variation in size

7 What is he symbol of profile of a line identified in geometrical tolerance form ?



8 What is the name of line corresponding to the eye level of the viewer in linear perspective ?

A Horizon line

B Vertical line

C Horizontal line

D Pictorial line

Choose the correct answer

1 Which type of cam is useful in controlling the movements of tool, specifically in fixture design ?

A Radial / plate cam

B Cylindrical / barrel cam

C Pivot beam cam

D Ordinary general purpose cam

2 Which machine having a horizontal work table with a vertical turret head meant for heavy work. ?

A Ram type turret lathe

B Vertical turret lathe

C saddle type turret lathe

D chucking machine lathe

3 Which type of collet has tapered bore fitted with three inner pad pushing against taper of accommodating sleeve ?

A Dead length collet

B Draw back collet

C Push out collet

D Self locking collet

4 Which type of lathe suitable for machining large castings and forging held in fixture with turret head ?

A Ram type turret

B Saddle type

turret C Vertical

turret

D Chucking type turret

5 Which type of tool holder is more suitable for turning external diameter with good finish and supports lengthy job ?

A Knee turning tool holder

B Roller steady tool holder

C Bar stop centre drill tool holder

D Facing and start drilling tool holder

6 Which type of collet where work piece does not move when operated but maintain very accurate length of job ?

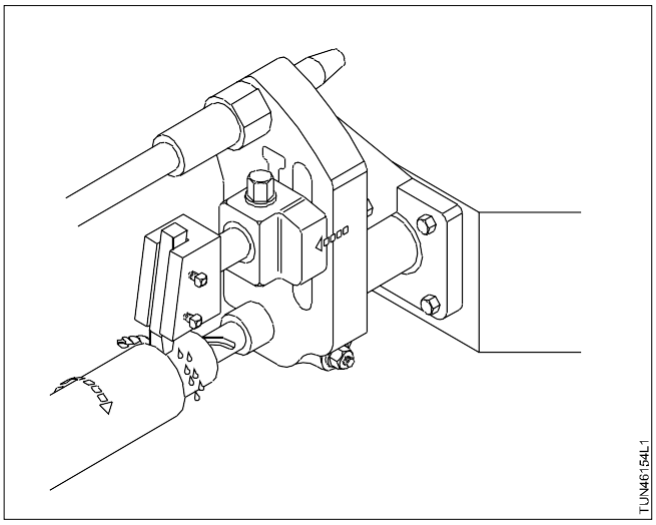
A Dead length collet

B Draw back collets

C Push out collets

D Self locking co

7 Identify the type of tool holder used on turret lathe ?



A Bar stop and centre drive tool holder

B Recessing and boring tool holder

C Knee turning tool holder

D Roller steady turning tool holder

8 Which type of tool holder is preferred for turning and combined operations of work held in chuck / fixture ?

A Knee turning tool holder

B Roller steady turning tool holder

C Bar stop and centre drill tool holder

D Floating reamer holder

9 Which function of modern automatic lathe is manual?

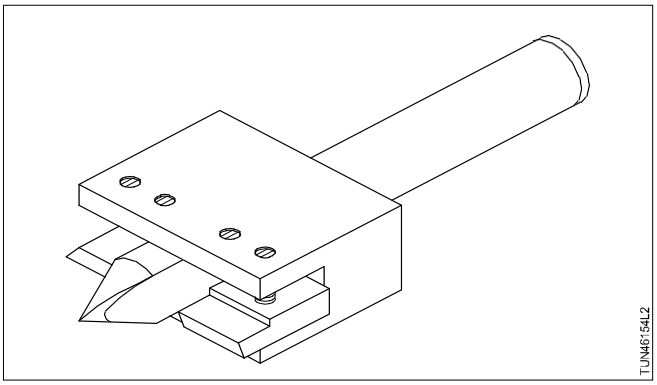
A Circulate the coolant

B Perform cutting operations

C Gauge and inspect the finished work piece

D change the speeds, feeds, and tools

10 Identify the type of tool holder



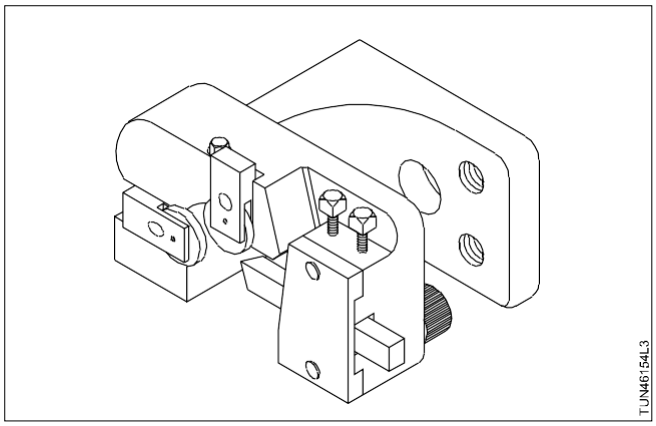
A Floating reamer holder

B Combination facing and start drilling holder

C Roller steady turning tool holder

D Knee turning tool holder

11 Name the type of tool holder



A Bar stop and centre drive tool holder

B Knee turning tool holder

C Recessing and boring tool holder

D Roller steady turning tool holder

12 Which type of lathe is most suitable for mass production can be managed with semi skilled operator & has bar feeding arrangement?

A Production lathe

B Centre lathe

C Copying lathe

D Spinning lathe

13 Which type of lathe is most suitable for tool room job and in which various sizes of thread can be cut with a single point tool with low investment?

A Production lathe

B Centre lathe

C Copying lathe

D spinning lathe

14 Which type of lathe is heavy duty having automatic control for feeding tools; indexing tools, change of speed of feed turret & cross slide movement?

A automatic turret lathe

B single speed automatic lathe

C multi spindle automatic lathe

D automatic screw lathe

15 In which type of lathe, bars are fed in to the spindle located in to the spindle carrier position produces extremely fast production?

A A automatic turret lathe

B Single speed automatic lathe

C Multi spindle automatic lathe

D Automatic screw lathe

ANSWERS

CNC Technology Basics

1. D 2. A 3. B 4. A 5.D 6. D
7. A8. C 9. C 10. A 11. B 12. 13. B

Machine Model, Control System & Specification

1. B 2. A 3. C 4. A 5. A 6. B
7. A 8.C 9. D 10. D 11. B 12. A 13. A 14. B

Axis Convention of CNC Machine

1. A 2. A 3. B 4. B 5. A 6. D 7. B 8. A 9. A 10. D 11. B 12. A 13. A 14. A 15. C
16. D

Importance of feedback system and concept of Co-ordinate Geometry

1. B 2. A 3. C 4. C 5. C

Coordinate Geometry & Machine Axis

1. D 2. A 3. B 4. B 5. D 6. D
7. C 8. A 9. D

Preparation of Part programming

1. C 2. A 3. B 4. A 5. C 6. B
7. B 8. A 9. D 10. C11. B 12. C13. A14. B15. A 16. B 17. B

Operational Modes

1. C 2. C 3. D 4. B 5. B 6. A
7. D 8. A 9.C 10. D 11.B 12. A 13. D 14. A15. B 16. B 17. C18. B 19. B

Types of Offsets

1.A 2. B 3. A 4. A 5. B 6. D 7. A 8. D 9. C10. C 11. B 12. D

Tool path study of Machining operation (Straight Turning)

1. C 2. C 3. D 4. B 5. D 6. C 7. D 8. C 9. A

Cutting parameters, cutting speed and feed depth of cut, CSM, tool wear, tool life.

1.A 2. A 3. D 4. A 5. C 6. C 7. B 8. C 9. A 10. B 11. A 12. C 13. B 14. C 15. A 16. A 17. A 18. C 19. B 20. C 21 A

Cutting tool materials for training

1. D	2. B	3. A	4. D	5. A	6.B
7. A	8. A	9. A	10. A	11. D	12. A
13. A	14. A	15. D	16.	17. C	

Tool Geometry, Insert Type Nomenclature of Inserts.

1. C	2. A	3. A	4. A	5. D	6. A

Describe tooling system for turning

1. A	2. C	3. B	4. A

Setting work and tool offset

1. D	2. B

Describe tooling system for CNC Turning centers

1. A	2. D

Cutting tool material for CNC turning

1. B	2. C	3. C

ISO Nomenclature for turning tool holder, boring tool holder, indexable insert.

1. C 2. C 3. C 4. B 5.A

Tool holders and inserts for radial grooving

1. D 2. A 3. D

Preparation of part programming as per drawing

1. C 2. C 3. A 4. C 5. D 6. C
7. 8. A 9. 10. C 11. D

Checking using CNC Simulator

1. C 2. D 3. B 4. C

Process and tool selection (CNC)

1. D 2. B 3. B 4. C

Part programming for grooving

1. C 2. D 3. A 4. C 5. D 6. C

Part programming for drilling

1. C 2. B 3. A 4. D 5. C 6.B

Part programming for Boring

1. C 2. B 3. C

Part programming for threading

1. A 2. D 3. B 4. B 5. A 6.A
7. D 8. A

Programming on CNC tapping

1. B 2. B 3. A 4. B 5. C 6.B

CNC Programme for grooving

1. B 2. C

CNC Programme for threading

1. B 2. A

Trouble shooting in CNC machines

1. C 2. A 3. C 4. D 5. A 6. D
7. D 8. D

Factors affecting quality & productivity

1. C 2. C 3. D 4. B 5. A 6. A
7. B 8. B

Parting of Operation in a CNC

1. B 2. D 3. C 4. A 5. B 6. D

Bar Feeding system through Bar Feeder

1. A 2. D 3. C

Input and output data

1. B 2. C 3. C 4. B 5.D 6. B
7. C 8. C 9. C 10. B 11. B 12.D

Heat treatment

1-D 2B 3-B 4-A 5-C 6-C 7-A 8-A 9-C 10-D
11-B 12-C 13-A 14-D 15-B 16-B 17-C 18-B 19- A 20-A
21-C 22-A 23-B 24-D 25-C 26-B 27-A 28-A 29-B 30-A
31-C 32-B 33-B 34-A 35-C 36-B 37-C 38-B 39-A 40-B
41-B 42-A 43-B 44-A 45-D 46-C 47-D 48-A 49-A 50-C
51-A 52-B 53-A 54-C 55-B 56-B 57-D 58-D 59-B 60-A
61-D 62-C 63-B 64-B 65-C 66-A 67-C 68-A 69-D 70-C
71-C 72-D 73-A 74-A 75-B 76-C 77-B 78-A 79-D 80-D
81-B 82-A 83-B 84-A 85-C 86-D 87-D 88-B 89-A 90-D
91-D 92-B 93-C 94-C 95-D 96-A 97-A 98-C 99-B 100-D
101. A 102. C 103. A 104. B 105. B 106. A 107. A 108. C 109. A 110. B
111. C 112. B 113. D 114. A 115. B 116. B 117. B 118. C 119. C 120. B
121. A 122 B

Interchangeability meaning procedure for adoption quality control procedure for quality production

1. B	2. B	3. B	4. C	5. B	6. C
7. B	8. A	9. C	10. D	11. C	12. A
13. A	14. B	15. A	16. D	17. D	18. C
19. B	20. B	21. D			

Surface texture measuring instruments

1. C	2. A	3. B	4. D	5. A	6. B
7. B	8. A	9. B	10. A	11. A	12. A
13. A	14. B	15. C	16. D	17. B	18. D
19. C	20. C	21. C	22. A	23. B	

Importance of Technical term used in industry

1. C	2.C	3. A	4. D	5. D	6. B
7. A	8. C				

Terms used in part drawing and Geometrical tolerance and symbols

1. A	2. B	3. A	4. B	5. A	6. A
7. B	8. A				

Automatic lathe – types- parts, tool holders theory of calculation

1. C	2. B	3. C	4.D	5. B	6. A
7. C	8. A	9. C	10.B	11.D	12.A
13. B	14.B	15.C			