Machinist - 1st Semester - Module: 1 - Safety

Questions: Level 1

1 Which comes under the machine safety?
A Don't wear a ring, watch or chain
B Don't walk under suspended load
C Stop the machine before changing the speed
D Don't try to stop a running machine in with hands

2 What is the class of fire due to wood, paper, cloth?
A Class A
B Class B
C Class C
D Class D

3 What is the colour code of bin for paper waste?
A Red
B Blue
C Green
D Yellow

4 What is the colour code of bin for plastic waste?
A Red
B Blue
C Green
D Yellow

5 Which term indicates the neatness and cleanliness of workplace in 5s concept?
A Set
B Sort
C Shine
D Sustain

6 Which is used to protect eyes while grinding?
A Apron
B Shoes
C Helmet
D Goggles

7 Which is the less expensive less polluted and energy saving waste disposal method?
A Recycling
B Land fills
C Composting
D Burning the waste material

Questions: Level 2

1 Which fire extinguishers is used for flammable liquid fires?

A Halon extinguisher
B Foam extinguisher
C Water filled extinguisher (Gas cartridge type)
D Water filled extinguisher (Stored pressure type)

2 Which fire extinguishers is used with electrically non-conductive chemicals?

A Halon extinguisher
B Foam extinguisher
C Dry powder extinguisher
D Water filled extinguisher

3 Which type of extinguisher is used for class D fire?

A Foam extinguisher
B Dry powder extinguisher
C Water filled extinguisher (gas cartridge type)
D Water filled extinguisher (stored pressure type)

4 What 'A' stands for in 'ABC' of first aid?

A Away
B Acute
C Airway
D Accident

5 What is the first aid for the third degree burns?

A Apply cream
B Bind bandage
C Flush with cool water
D Cover with a damp cloth

6 What is the first aid for the second degree burns?

A Apply cream
B Bind bandage
C Flush with cool water
D Covered with a damped cloth

7 How to make use of metal chips?

A Burning
B Land fills
C Recycling
D Composting

Module: 1 - Safety - Key paper

Questions: Level 1

SL.No	Key
1	C
2	A
3	B
4	D
5	C
6	D
7	A

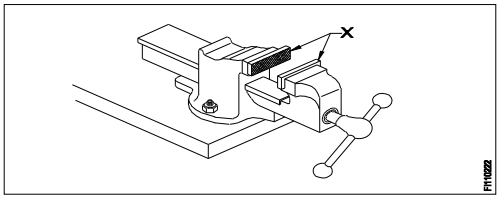
Questions: Level 2

SL.No	Key
1	B
2	B
3	B
4	C
5	D
6	C
7	C

Machinist - 1st Semester - Module: 2 : Basic Fitting - 1. Measuring Instrument Tools

Questions: Level 1

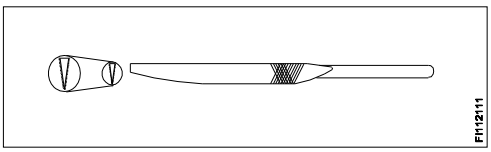
1 What is the name of the part marked as 'X'?



A Handle
B Hard Jaw
C Fixed Jaw
D Moveable Jaw

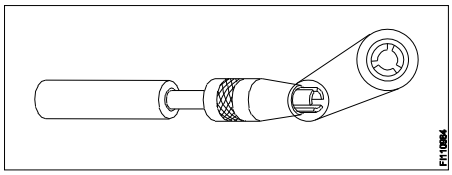
2 How the bench vices are specified?
A Width of jaw
B Length of spindle
C Length of fixed jaw
D Moving distance of moveable jaw

3 What is the shape of the needle file



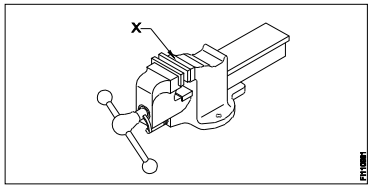
A Crossing
B Half round
C Knife - edge
D Feather edge

4 What is the name of the vice?



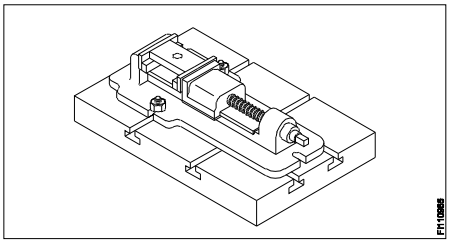
A Pin vice
B Hand vice
C Pipe vice
D Quick release vice

5 What is the name of the part marked 'x'?



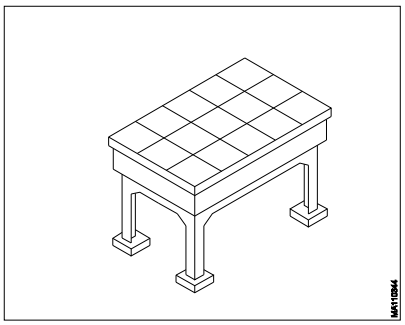
A Handle
B Spindle
C Fixed jaw
D Movable jaw

6 What is the name of the vice?



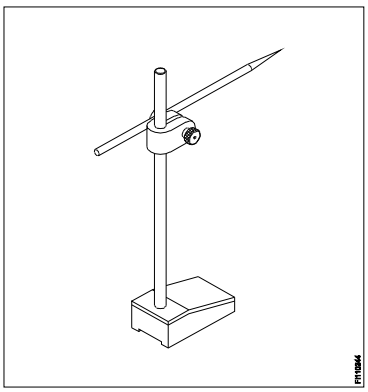
A Pin vice
B Hand vice
C Pipe vice
D Tool maker's vice

7 What is the name of the equipment?



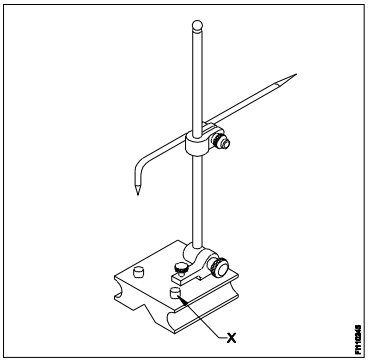
A Angle plate
B Machine table
C Surface plate
D Marking off table

8 What is the name of the marking tool?



A Scriber
B Surface Plate
C Universal surface gauge
D Fixed type surface gauge

9 What is the name of the part marked 'X' ?

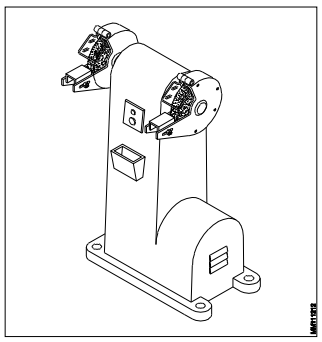


A Snug
B Scriber
C Guide pin
D Rocker arm

10 Which one of the marking media will take more time to dry?

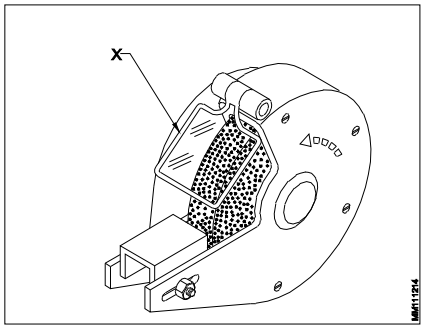
A White wash
B Prussian blue
C Copper sulphate
D Cellulose lacquer

11 What is the name of the grinder?



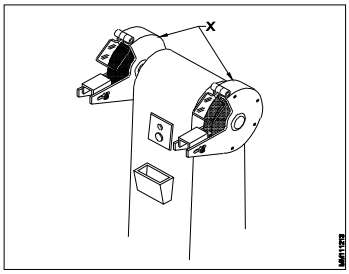
A Bench grinder
B Surface grinder
C Pedestal grinder
D Portable grinder

12 What is the name of the part of marked 'X'?



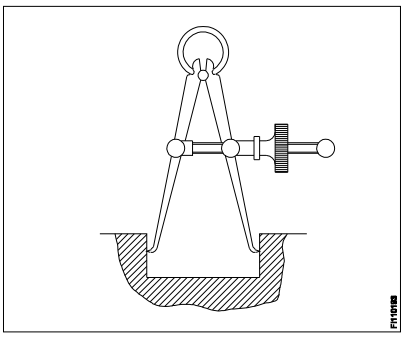
A Tool rest
B Eye shield
C Wheel guard
D Grinding wheel

13 What is the name of part marked as 'x'?



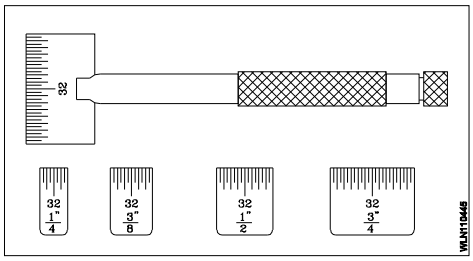
A Tool rest
B Wheel guard
C Grinding wheel
D Coolant container

14 What is the name of the Instrument?



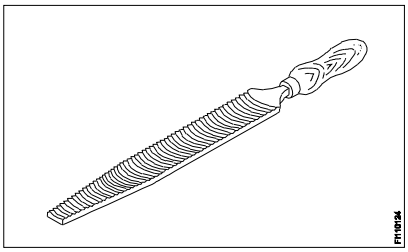
A Firm joint inside caliper
B Firm joint outside caliper
C Spring joint inside caliper
D Spring joint outside caliper

15 What is the type of the steel rule?



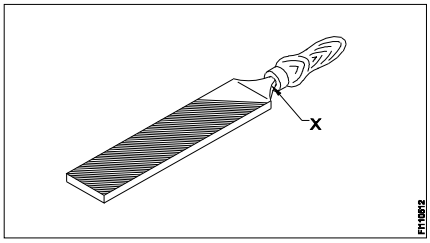
A Folding rule
B Short steel rule
C Narrow steel rule
D Steel rule with tapered end

16 What is the cut of file?



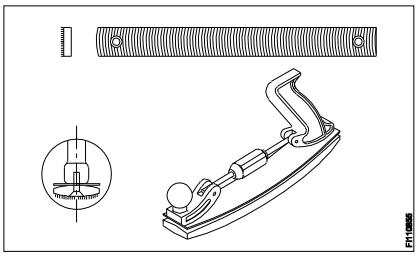
A Rasp cut
B Curved cut
C Double cut
D Single cut

17 What is the name of the part of the file marked ‘x’?



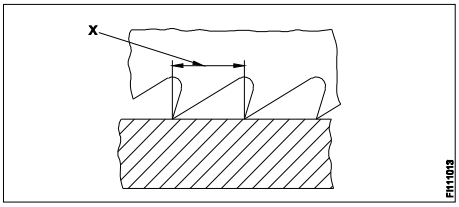
A Tip
B Heel
C Tang
D Shoulder

18 What is the name of the file?



A Rotary file
B Tinker’s file
C Barrette file
D Mill saw file

19 What is the name of the hacksaw blade element marked ‘X’?

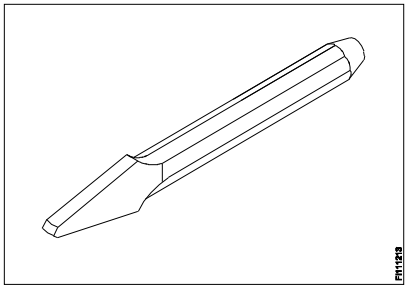


A Depth of teeth
B Pitch of teeth
C Width of teeth
D Length of blade

20 Which is the most suitable pitch for hack saw blade for cutting high carbon steel?
A 0.8 mm
B 1.0 mm
C 1.4 mm
D 1.8 mm

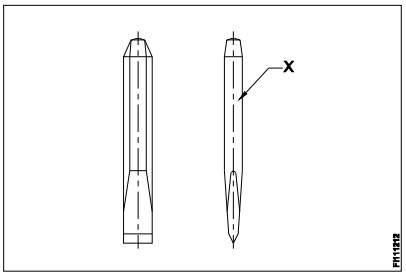
21 What is the other name of cross cut chisel?
A Web chisel
B Cape chisel
C Diamond point chisel
D Half round nose chisel

22 What is the name of the chisel?



A Web
B Flat
C Cross cut
D Diamond point

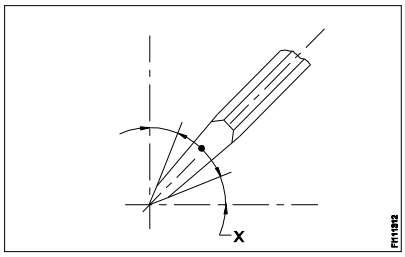
23 What is the name of the part marked ‘x’?



A Body
B Face
C Head
D Point

24 What is the maximum carbon percentage of forgeable steel?
A Up to 1%
B Up to 1.2%
C Up to 1.7%
D Up to 3%

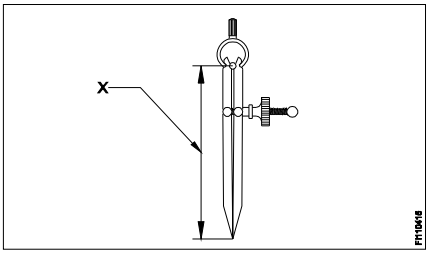
25 What is the name of the angle marked ‘x’?



A Rake angle
B Point angle
C Clearance angle
D Angle of inclination

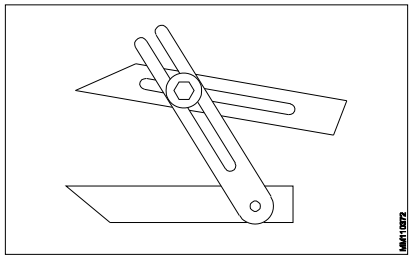
26 What is the point angle of chisel to cut mild steel?
A 45°
B 50°
C 55°
D 60°

27 What is indicated by ‘X’?



A Leg
B Size
C Spring
D Fulcrum

28 What is the name of the angular measuring instrument?

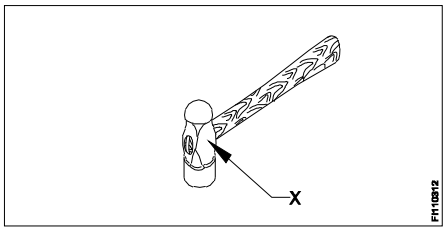


A Bevel gauge
B Bevel protractor
C Universal bevel gauge
D Vernier bevel protractor

29 What is the angle of centre punch?
A 30°
B 60°
C 75°
D 90°

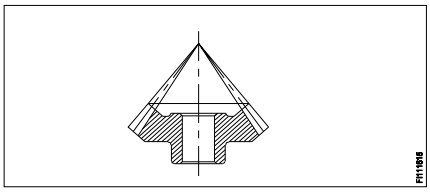
30 Which part of the hammer the handle is fixed?
A Pein
B Face
C Check
D Eye Hole

31 What is the name of the part marked ‘X’?



A Face
B Pein
C Cheek
D Eye hole

32 Which type of datum reference is shown?



A Edge datum
B Line datum
C Point datum
D Horizontal datum

Questions: Level 2

1 What is the grade of file used for rapid and larger quantity of metal removal?
A Rough file
B Bastard file
C Smooth file
D Second cut file

2 Which grade of file is used to bring the material to accurate size with a high degree of finish?
A Rough file
B Bastard file
C Second cut file
D Dead smooth file

3 Which grade of files remove small quantities of material and to give good finish?
A Rough file
B Smooth file
C Bastard file
D Second cut file

4 Which file is used for filing narrow grooves and angle more than 10^0?
A Round file
B Triangular file
C Half round file
D Knife - edge file

5 What is the purpose of 'V' groove provided on the base of universal surface gauge?
A Used on irregular surface
B Used on flat datum surface
C Used on angular datum surface
D Used on cylindrical datum surface

6 What is the name of the instrument used for marking lines parallel to inside and outside edges?
A Divider
B Jenny caliper
C Inside caliper
D Outside caliper

7 How the callipers are classified?
A Size
B Accuracy
C Material
D Joint & legs

8 Which part of the pedestal grinder support the work while grinding?
A Base
B Body
C Tool rest
D Wheel guard

9 What is the purpose of a work rest of the pedestal grinder?
A Hold the work
B Support the work
C Support the wheel
D Support the machine

10 What is the purpose of a bastard file?
A Bring material to accurate size
B Remove small quantity of material
C Brings job close to finishing size
D For heavy reduction of material

11 What is the use of a Half round nose chisel?
A For cutting key ways
B For cutting curved grooves
C For squaring material at the corners
D For removing metal from flat surfaces

12 What is the use of a cross cut chisel?
A For cutting curved grooves
B Squaring material and corners
C For cutting keyways, grooves, slots
D Separating metal after chain drilling

13 What is the name of the chisel used to chip - off excess metal of welded joints and castings?
A Flat chisel
B Cross cut chisel
C Diamond point chisel
D Half round nose chisel

14 Which caliper is used for marking parallel lines to the edge of the job?
A Divider
B Jenny caliper
C Inside caliper
D Outside caliper

15 What material is used for making scriber?
A Mild steel
B High speed steel
C High carbon steel
D Medium carbon steel

16 Which type of vice is used for gripping screws, rivets, keys and other similar objects?

A Pin vice

B Hand vice

C Pipe vice

D Quick release vice

17 Which type of punch is used for marking witness marks on work surface?

A Dot punch

B Centre punch

C Hollow punch

D Prick punch 30°

18 What is the use of a 30^0 prick punch?

A Making hole

B Marking witness marks

C Locating centre of the hole

D Marking light punch marks for divider point

Questions: Level 3

1 What will happen if the datum surface is not perfectly flat?

A Marking is accurate

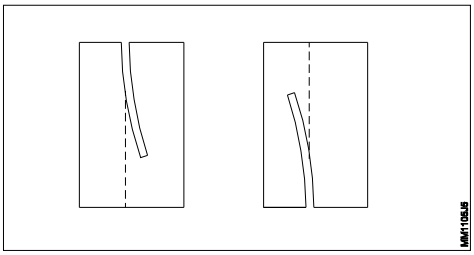
B Marking is inaccurate

C Surface finish will decrease

D Surface finish will increase

---

2 What could be the remedy if the cutting deviated from the line of marking?



A Continue cutting

B Replace the hacksaw blade

C Slow down the cutting and finish in the same line

D Start cutting from the opposite side on the same line

---

3 What will happen if run a grinder without truing?

A Excessive vibration

B Get better surface

C Less metal removed

D More metal removed

---

4 What will happen if the rake angle of a chisel increases?

A Chisel will slip

B cutting edge break

C Proper cutting take place

D Cutting edge digs in the work

---

5 What will happen if clearance angle of a chisel increases?

A Good cutting

B Less cutting

C Chisel will slip

D Cutting edge dig in the work

Module: 2 : Basic Fitting - 1. Measuring Instrument Tools - Key paper

Questions: Level 1

SL.No	Key
1	B
2	A
3	C
4	A
5	C
6	D
7	D
8	D
9	C
10	B
11	C
12	B
13	B
14	C
15	B
16	B
17	D
18	B
19	B
20	C
21	B
22	C
23	A
24	D
25	C
26	C
27	B
28	C
29	D
30	D
31	C
32	C

Questions: Level 2

SL.No	Key
1	A
2	D
3	B
4	D
5	D
6	B
7	D
8	C
9	B
10	D
11	B
12	C
13	A
14	B
15	C
16	A
17	A
18	D

Question: Level 3

SL.No	Key
1	B
2	D
3	A
4	A
5	D

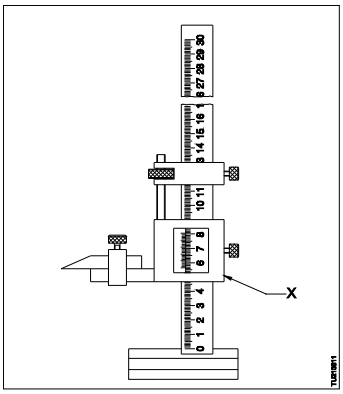
Machinist - 1st Semester - Module 2 : Basic Fitting - 2. Drilling and Taper

Questions: Level 1

1 What is the least count of vernier height gauge?

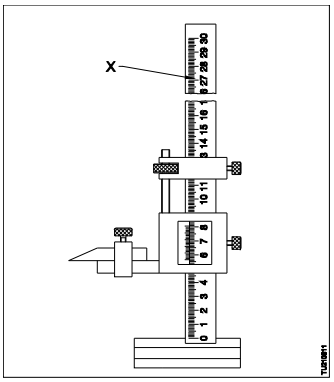
A 0.001 mm
B 0.002 mm
C 0.005 mm
D 0.02 mm

2 What is the name of the part marked as 'x' in the height gauge shown?



A Main scale
B Main slide
C Jan clamp
D Vernier scale

3 What is the part shown as 'x' in the figure?



A Main scale
B Vernier scale
C Beam
D Main slide

4 How we specify a vernier height gauge?

A Width of beam
B Height of beam
C Thickness of beam
D Size of base

5 What is the term in BIS limits fits to mention the size with dimensional durations?

A Size
B Basic size
C Actual size
D Maximum size

6 What is the formula for finding maximum limit size in BIS system?

A Maximum limit = Basic size + Upper deviation
B Maximum limit = Basic size + Lower deviation
C Maximum limit = Upper deviation – Basic size
D Maximum limit = Lower deviation – Basic size

7 What is the definition of 'tolerance' in BIS system?

A Difference between basic size & actual size
B Algebraic difference between maximum limit & basic size
C Difference between maximum limit & minimum limit
D Algebraic difference between minimum limit & basic size

8 Which fundamental deviation symbol indicate shaft basis system?

A H
B h
C P
D j

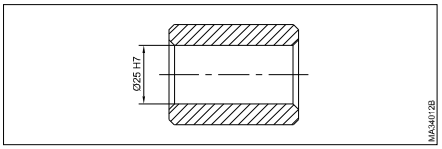
9 What is mean by 'upper deviation' in BIS system of limits & fits?

A Maximum size of a component
B Minimum size of a component
C Algebraic difference between maximum limit & minimum limit
D Algebraic difference between maximum limit & basic size

10 Which size will represent the zero line in limit terminology?

A Basic size
B Actual size
C Minimum size
D Maximum size

11 What is the meaning of 'H' in the drawing?



A Basic size
B Tolerance
C Fundamental tolerance
D Fundamental deviation of hole

12 What is the fundamental deviation of dimension ϕ 25H7?

A 7
B H
C H7
D 25

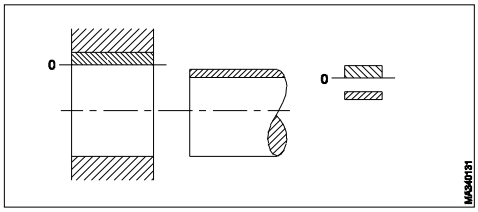
13 What is the definition of fits?

A Maximum size of a dimension
B Minimum size of a dimension
C Permissible deviation of a dimension
D Relationship that exist between two mating parts

14 Which type of fit is obtain of the hole is bigger than the shaft?

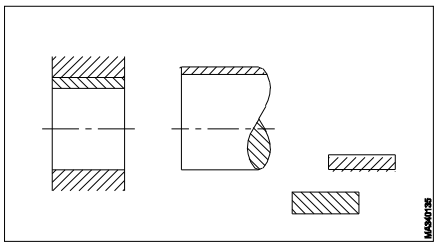
A Tight fit
B Transition fit
C Clearance fit
D Interference fit

15 Which type of fit is indicated in figure?



A Tight fit
B Transition fit
C Clearance fit
D Interference fit

16 What type of fit is shown in figure?



A Tight fit
B Transition fit
C Clearance fit
D Interference fit

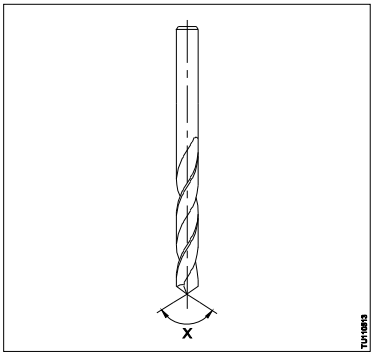
17 What is the maximum size of the hole can be drilled by sensitive drilling machine?

A 1.25 mm
B 12.5 mm
C 25 mm
D 12.5 cm

18 What is the point angle of drill for drilling mild steel?

A 80°
B 90°
C 118^0
D 120^0

19 What is the name of the angle marked 'X'?



A Helix angle
B Point angle
C Chisel angle
D Lip clearance angle

20 What is the formula to find out RPM of drill?

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

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

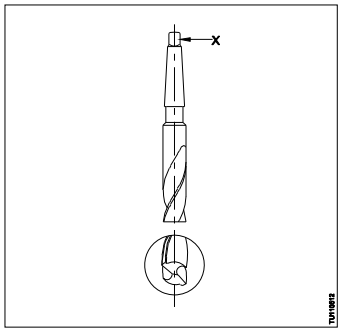
C $\frac{V \times 1000}{\pi d}$

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

21 How many numbers are in metric tap set?

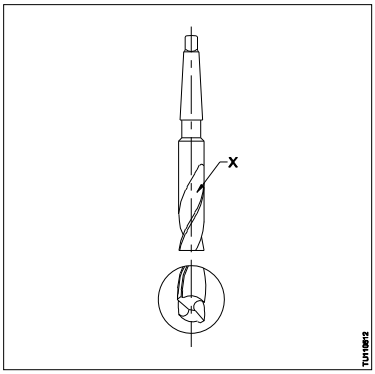
A 1
B 2
C 3
D 4

22 What is the name of the part marked as 'X'?



A Lip
B Tang
C Heel
D Flute

23 What is the name of the part marked as 'X'?



A Lip
B Tang
C Heel
D Flute

24 What the is name of the cone shaped end of a drill?

A Tang
B Flute
C Point
D Margin

25 What is the name of the driving end which is fitted on the machine?

A Lip
B Heel
C Flute
D Shank

26 What is the name of the portion of a drill between the point and the shank?

A Tang
B Body
C Land
D Flute

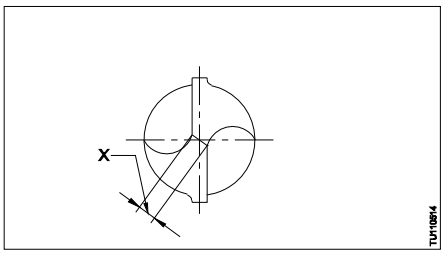
27 Which portion of drill the flutes are cut?

A Body
B Tang
C Point
D Shank

28 Which part of drill forms the cutting edge?

A Body
B Land
C Point
D Flutes

29 What is the name of the part marked 'X'?



A Web
B Land
C Flute
D Dead centre

30 What is the formula to find tap drill size in general purpose?

A Major dia meter minus pitch
B Major dia meter minus 3 x pitch
C Major dia meter minus 2 x pitch
D Major dia meter minus $\frac{1}{2}$ x pitch

31 What is mass production ?

A Producing work in pairs

B Producing a work in single piece

C Producing an work in large numbers

D Producing an work in limited numbers

32 Which system of limits and fits are followed in our country?

A BIS system

B DIN system

C BSS system

D FPS system

33 Which term used to indicate external dimension of a componend in BIS system of limits & fits?

A Hole

B Shaft

C Deviation

D Tolerance

34 What is meant by 'Lower deviation' in BIS system?

A Algebraic difference between maximum limit and basic size

B Algebraic difference between minimum limit and basic size

C Algebraic difference between maximum limit and minimum limit

D Algebraic difference between basic size and upper deviation

35 How many fundamental deviation are in BIS system.

A 12

B 18

C 20

D 25

36 How many grades of tolerances are represented in BIS system?

A 12

B 15

C 18

D 25

37 Which fundamental deviation symbol indicate 'Hole basis' system?

A h

B H

C P

D j

Questions: Level 2

1 Which device is used as datum while marking with vernier height gauge
A Face plate
B Surface plate
C Angle plate
D Driving plate

2 What is term 'Basic size' indicate?
A Minimum limit size of the work
B Maximum limit size of the work
C Size of the compound after it is manufactured
D Size based on dimensional deviations are given

3 How to indicate fundamental deviation of hole in BIS system?
A Small letter
B Capital letter
C Numbers only
D Either capital or small letters

4 What is the maximum limit size of dimension $\phi 25^{+0.003}_{-0.001}$?
A 25.003 mm
B 25.001 mm
C 24.997 mm
D 24.999 mm

5 What is the minimum limit size of a dimension $\phi 50^{+0.03}_{-0.02}$?
A 50.03 mm
B 50.02 mm
C 49.97 mm
D 49.98 mm

6 What is the tolerance of dimension $\phi 30 \pm 0.02$?
A 30 mm
B 0.04 mm
C - 0.02 mm
D + 0.02 mm

7 Which part of the drill carries the coolant to the cutting edge?
A Lip
B Land
C Flute
D Point

8 What is the name of the operation for making holes on work piece?
A Boring
B Drilling
C Reaming
D Counter sinking

9 Which way the coolant flows through the cutting edge in a drill?
A Web
B Land
C Body
D Flutes

10 Why the tap drill size to be calculated?
A To avoid drill breaking
B To avoid material wastage
C To calculate sufficient cutting speed
D To maintain sufficient material to tap

11 What is an advantage of mass production?
A Production rate is increased
B Measuring time is increased
C Jigs and fixtures are needed
D Special purpose machines are needed

12 What is the disadvantage of mass production?
A Production rate is low
B Cost of piece is reduced
C Jigs and fixtures are needed
D Gauges are used to check the component

Questions: Level 3

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

A To check eccentricity
B For accurate marking
C For accurate measuring
D For good appearance

Module 2 : Basic Fitting - 2. Drilling and Taper - Key paper

Questions: Level 1

SL.No	Key
1	D
2	B
3	A
4	B
5	B
6	A
7	C
8	B
9	D
10	A
11	D
12	B
13	D
14	C
15	C
16	D
17	B
18	C
19	B
20	C
21	C
22	B
23	D
24	C
25	D
26	B
27	A
28	D
29	A
30	A
31	C
32	A
33	B
34	B
35	D
36	C
37	B

Questions: Level 2

SL.No	Key
1	B
2	D
3	B
4	A
5	D
6	B
7	C
8	B
9	D
10	D
11	A
12	C

Question: Level 3

SL.No	Key
1	A

Machinist - 1st Semester - Module 2 : Basic Fitting - 3. Fittings

Questions: Level 1

1 What is denoted by 'V' in the formula

$V = \frac{\pi dn}{1000}$?

A Feed in m / rev
B Feed in mm / rev
C Cutting speed in m / min
D Cutting speed in mm / min

2 What is termed as peripheral speed of drill?
A Feed
B Depth of cut
C Cutting speed
D Rpm of spindle

3 What is the expansion of rpm used in drilling?
A Revolution per mile
B Revolution per meter
C Revolution per minute
D Retardation per minute

4 What is the distance a drill advances in one rotation while drilling?
A Feed
B Depth of cut
C Cutting speed
D Cutting length

5 How to express feed in drilling?
A m / rev
B m / min
C mm / rev
D mm / hour

6 What is denoted by 'd' in the formula

$v = \frac{\pi\, d\, n}{1000}$ m / min ?

A Diameter of drill
B Length of the drill
C Diameter of work
D Diameter of spindle

7 What is a vernier caliper?
A Angular measuring instrument
B Indirect measuring instrument
C Precision measuring instrument
D Telescopic measuring instrument

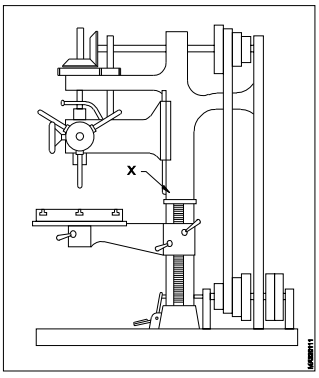
8 Which is an integrated part of beam of a vernier caliper?
A Fixed jaw
B Depth bar
C Thumb lever
D Vernier slide

9 What is the name of the graduation on the beam of a vernier caliper?
A Barrel divisions
B Thimble divisions
C Main scale divisions
D Vernier scale divisions

10 How much distance is moved by the spindle of micrometer in one rotation?
A 0.50 mm
B 0.75 mm
C 1.00 mm
D 1.50 mm

11 What is the least count of metric vernier micro meter?
A 0.1 mm
B 0.01 mm
C 0.001 mm
D 0.0001 mm

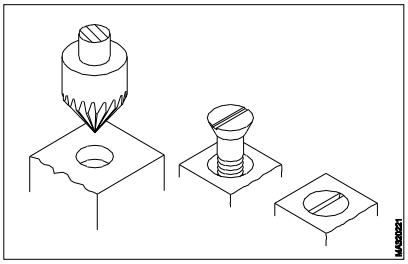
12 What is the name of part marked 'x'.



A Column
B Spindle
C Over head shaft
D Table elevating clamp

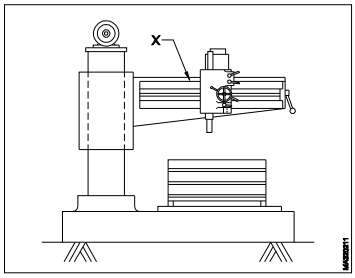
13 Where is the drilling machine spindle head is fixed in radial drilling machine?
A Base
B Column
C Radial arm
D Auxiliary table

14 What is the name of the operation?



A Reaming
B Spot facing
C Counter boring
D Counter sinking

15 What is the name of the part 'x'?



A Base
B Column
C Radial arm
D Spindle head

16 Which type of drilling machine is most suitable to drill in a very large and heavy work pieces?
A Piller drilling machine
B Radial drilling machine
C Portable drilling machine
D Sensitive drilling machine

17 What is the angle of counter sink rivet head?
A 75°
B 80°
C 90°
D 120°

18 What is the angle of beveled heads of counter sink head screws?
A 75°
B 80°
C 90°
D 120°

19 Which type fo drilling machine is best suited to drill multiple holes in a work piece in a single setting?
A Radial
B Portable
C Sensitive
D Piller type

Questions: Level 2

1 Calculate the cutting speed used for drilling a 20 mm dia meter hole in a mild steel work piece with a rpm of 399?

A 20 m / min
B 25 m / min
C 30 m / min
D 35 m / min

2 Calculate the rpm for drilling a hole of dia meter 16 mm on cast iron with a cutting speed 30 m / minute?

A 497 rpm
B 597 rpm
C 697 rpm
D 797 rpm

3 What is the function of thumb lever of vernier caliper?

A For getting least count
B To take internal measurement
C To take external measurement
D To set vernier slide at any position

4 Why the extreme care should be taken while handling vernier calliper?

A Measuring instrument
B Indirect measuring instrument
C Precision instrument
D Semi precision instrument

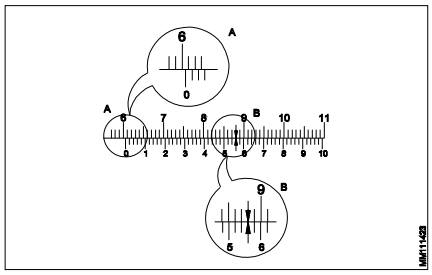
5 What is the least count in a vernier caliper if 9 main scale divisions (9mm) are divided in to 10 equal parts in the vernier scale?

A 0.02 mm
B 0.05 mm
C 0.10 mm
D 0.20 mm

6 What is the least count of a vernier caliper if 19 main scale divisions (19 mm) are divided into 20 equal parts in the vernier scale?

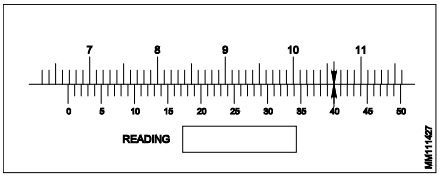
A 0.01 mm
B 0.02 mm
C 0.05 mm
D 0.10 mm

7 What is the reading shown in the vernier calliper? (Least count = 0.02 mm)



A 0.6056 mm
B 6.056 mm
C 6.56 mm
D 60.56 mm

8 What is the reading of the vernier caliper?



A 6.640
B 6.680
C 66.40
D 66.90

9 What is the use of outside micrometer?

A For depth measurement
B For angular measurements
C For internal measurements
D For external measurements

10 What is the mechanism used in a micrometer?

A Lever mechanism
B Thread mechanism
C Spring mechanism
D Plunger mechanism

11 What is the function of ratchet stop in a micro meter?

A Increases accuracy
B Strengthen the spindle
C Ensure uniform pressure
D Keeps high pressure on anvil

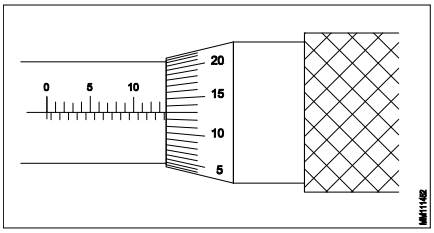
12 Which gap from spindle face is considered as the reading of outside micrometer?

A Anvil
B Frame
C Barrel
D Thimble

13 What is the least count of the micrometer if the circumference of thimble is divided into 50 division and the pitch of thread is 0.5 mm?

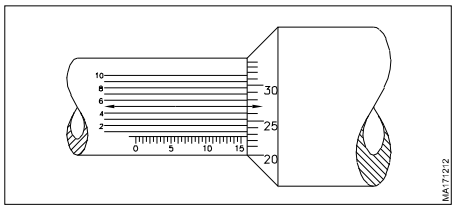
A 0.001 mm
B 0.010 mm
C 0.020 mm
D 0.050 mm

14 What is the reading of micrometer range of ot.25?



A 13.13 mm
B 13.63 mm
C 13.93 mm
D 13.99 mm

15 What is the reading of vernier micrometer?



A 15.225 mm
B 16.233 mm
C 15.235 mm
D 16.235 mm

16 Which instrument is used for comparing and determining the variation in the size of compared?

A Micrometer
B Vernier caliper
C Combination set
D Dial test indicator

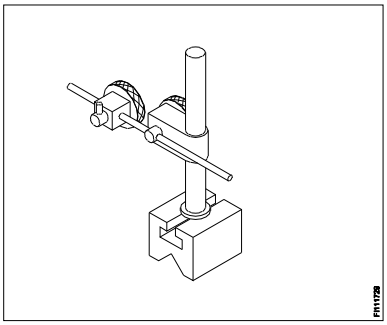
17 What mechanism is used to convert linear motion of plunger to rotary motion of pointer in D.T.I?

A Back gear mechanism
B Rack and pinion mechanism
C Can and following mechanism
D Worm and worm wheel mechanism

18 How does a lever type dial test indicator make the pointer rotation?

A Back gear mechanism
B Rack and pinion mechanism
C Lever and scroll mechanism
D Worm and worm wheel mechanism

19 What is the purpose of 'T' slots in the dial test indicator stand?



A Direction of use
B To set zero here
C Provision of ring bezel
D Provision to insert in clamps

20 How does the concentricity of shafts can be checked?

A Using centre gauge
B Using vernier caliper
C Using combination set
D Using dial test indicator

21 What is the maximum size of hole that can be drilled using a up right drilling machine?

A ϕ 20 mm
B ϕ 25 mm
C ϕ 32 mm
D ϕ 50 mm

22 Which type of drilling machine have a table with sliding motion in two direction, 90° to each other?

A Portable drilling machine
B Sensitive drilling machine
C Box - column type piller drilling machine
D Round column type piller drilling machine

23 What is the purpose of 'depth stop' in a drilling machine?

A To drill big holes
B To flush out chips
C To measure hole depth
D To control the down ward movement of drill spindle

24 Which one of the following operation is used to bevel the mouth of a drilled hole.

A Reaming

B Spot facing

C Counter boring

D Counter sinking

25 What is the purpose of counter sinks with pilot?

A For rough works

B Light duty works

C Medium size holes

D To align with drilled hole

Questions: Level 3

1 What will happen, if reamer is removing out in anticlockwise direction while reaming?

A Good surface finish

B Good dimension accuracy

C Rough surface

D Scratched surface

2 What is the bevelling angle for holes to be threaded?

A 75°

B 120°

C 90°

D 80°

3 What is the effect while measuring if ratchet stop is not provided on micrometer?

A Incorrect reading

B Least count increases

C Least count decreases

D Increases the life of micro meter

Module 2 : Basic Fitting - 3.Fittings - Key paper

Questions: Level 1

SL.No	Key
1	C
2	C
3	C
4	A
5	C
6	A
7	C
8	A
9	C
10	A
11	C
12	A
13	C
14	D
15	C
16	B
17	A
18	C
19	A

Questions: Level 2

SL.No	Key
1	B
2	B
3	D
4	C
5	C
6	C
7	D
8	D
9	D
10	B
11	C
12	A
13	B
14	A
15	A
16	D
17	B
18	C
19	D
20	D
21	D
22	C
23	D
24	D
25	D

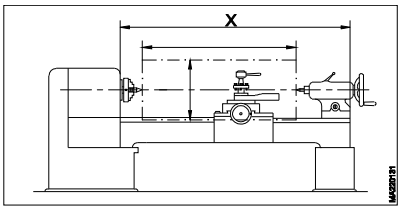
Question: Level 3

SL.No	Key
1	D
2	B
3	A

Machinist - 1st Semester - Module 3 : Turning - 1.Lathe part and Specification

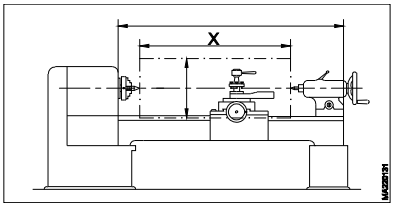
Questions: Level 1

1 What is the name of the part 'X'?



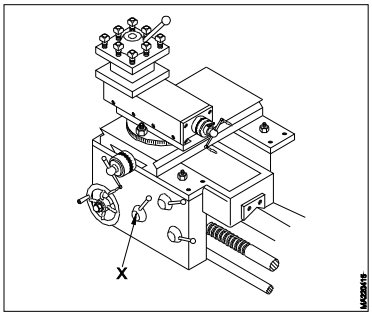
A Lead screw
B Length of bed
C Maximum diameter
D Length between centre

2 What is the name of the part 'X'?



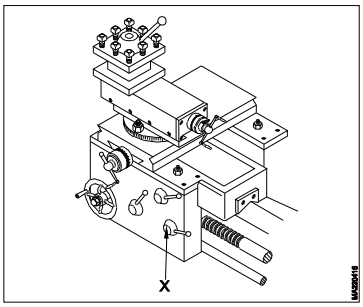
A Lead screw
B Length of bed
C Maximum Diameter
D Length between centre

3 What is the name of the part 'X'?



A Feed shaft
B Lead screw
C Feed shaft lever
D Lead screw lever

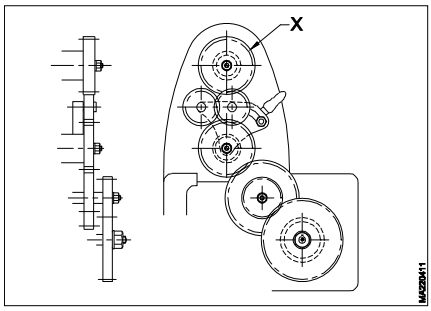
4 What is the name of the part 'X'?



A Feed shaft
B Lead screw
C Feed shaft lever
D Lead screw lever

5 Which gear unit the feed chart is fixed on the casting?
A Fixed stud gear
B Change gear unit
C Tumbler gear unit
D Quick change gear box

6 What is the name of the gear marked 'X'?

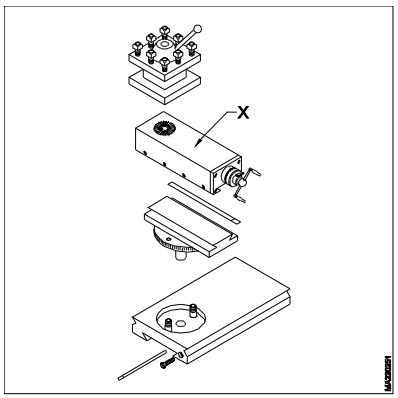


A Stud gear
B Spindle gear
C Tumbler gear unit
D Quick change gear box

7 How much the end cutting edge angle of lathe tools?
A 30°
B 40°
C 50°
D 60°

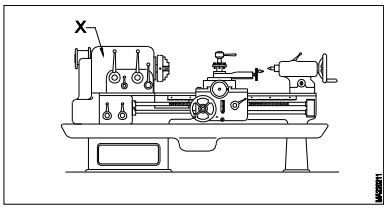
8 What will be the nose or edge angle of lathe tool?
A 45°
B 50°
C 60°
D 90°

9 What is the name of the part 'X'?



A Tool post
B Top slide
C Cross slide
D Swivel base

10 What is the part 'X'?



A Head stock
B Lead screw
C Tail stock
D Cross slide

11 Which gear is fitted to the main spindle and out side the head stock casting?
A Spindle gear
B Tumbler gear
C Fixed stud gear
D Change gear unit

12 What is name of the gear unit of the lathe which consists of three gears, each having same number of teeth?
A Spindle gear
B Fixed stud gear
C Change gear unit
D Tumbler gear unit

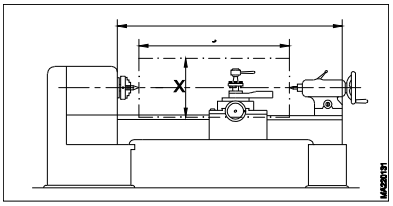
13 Which gear unit in a lathe is also called as reversing gear unit?
A Spindle gear
B Fixed stud gear
C Change gear unit
D Tumbler gear unit

14 Which gear gets the drive from the lathe main spindle gear through the tumbler gear?
A Spindle gear
B Fixed stud gear
C Change gear unit
D Fixed tumbler gear unit

15 What set of gears in available in a lathe for the purpose of feed changing as an additional unit?
A Spindle gear
B Fixed stud gear
C Change gear unit
D Tumbler gear unit

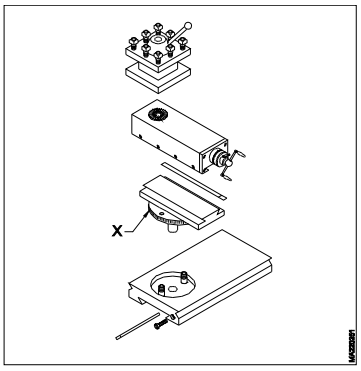
16 Which unit of feed mechanism of a lathe provides different feed rates can be given to the tool?
A Apron mechanism
B Change gear unit
C Tumbler gear unit
D Quick change gear box

17 What is the name of the part 'X'?



A Lead screw
B Length of bed
C Length between centres
D Maximum diameter (Swing) of the work that can be turned

18 What is name of the part 'X'?



A Tool post
B Top slide
C Cross slide
D Swivel base

Questions: Level 2

1 Which type of lathe is more suitable for mass production?

A Bench lathe
B Centre lathe
C Speed lathe
D Capstan and turret lathe

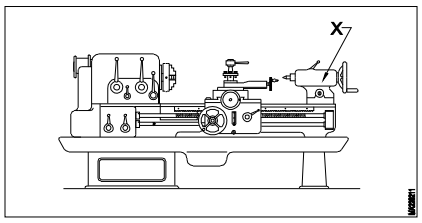
2 Which machine tool removes the metal from a revolving work piece with a stationery cutting tool?

A Lathe
B Shaper
C Milling machine
D Grinding machine

3 Which part of the lathe to hold cutting tools drills, reamers, drill chucks provided with the taper shanks?

A Carriage
B Head stock
C Tail stock
D Lathe chuck

4 What is the name of the part 'X'?



A Tail stock
B Lead screw
C Cross slide
D Compound rest

5 What is the purpose of steady rest in a lathe?

A To support a long job
B To support a shorter job
C To support a large diameter job
D To support an irregular shape job

6 Which tool angle of lathe are ground on tool controls the geometry of chip formation?

A Clearance angle
B End cutting angle
C Top or back rake angle
D Side cutting edge angle

7 Which tool angle is ground on parting and under cut tools both sides?

A Rake angle
B Clearance angle
C Side relief angle
D Side cutting edge angle

8 What is part of the lathe provides sideways up on which operating unit can be moved?

A Carriage
B Lathe bed
C Tail stock
D Cross slide

9 Which part of the lathe provided means of supporting the tool rest which holds the cutting tool?

A Top slide
B Head stock
C Cross slide
D Compound rest

10 Which part of the cone pulley head stock is engaged for reducing the spindle speed?

A Carriage
B Tail stock
C Cross slide
D Back gear unit

11 Which ways the carriage slides in a lathe?

A Lathe bed
B Tail stock
C Cross slide
D Compound rest slide

12 Which part of the lathe contains the mechanism for moving and controlling the carriage?

A The apron
B Top slide
C Cross slide
D Compound rest

13 Which mechanism the movement of carriage for screw cutting is actuated?

A Half nut mechanism
B Back gear mechanism
C Tumble gear mechanism
D Spindle gear mechanism

Questions: Level 3

1 Which tool angle is ground to prevent the tool rubbing from the work in a lathe?

A Rake angle
B Clearance angle
C End cutting edge angle
D Side cutting edge angle

2 Which tool angle in a lathe will weaken the cutting edge in case of increase of angle?

A Rake angle
B Clearance angle
C End cutting edge angle
D Side cutting edge angle

Module 3 : Turning - 1.Lathe part and Specification - Key paper

Questions: Level 1

SL.No	Key
1	B
2	D
3	C
4	D
5	D
6	B
7	A
8	D
9	B
10	A
11	A
12	D
13	D
14	B
15	C
16	D
17	C
18	D

Questions: Level 2

SL.No	Key
1	D
2	A
3	C
4	A
5	A
6	C
7	C
8	B
9	A
10	D
11	A
12	A
13	A

Question: Level 3

SL.No	Key
1	B
2	B

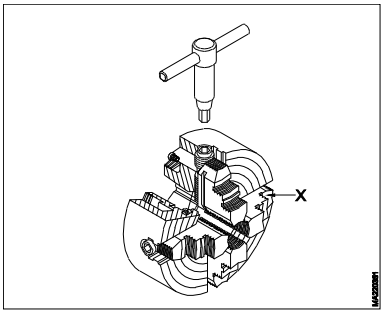
Machinist - 1st Semester - Module 3 : Turning - 2. Work Holding Device and Lathe Operation

Questions: Level 1

1 What is the accuracy of work that can be trued by 4 - Jaw chuck?

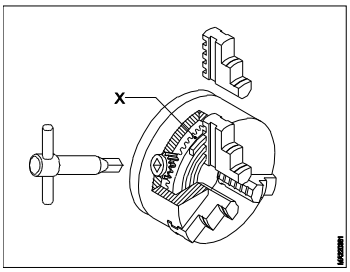
A 0.02 mm
B 0.04 mm
C 0.05 mm
D 0.07 mm

2 What is the name of the part marked as 'X'?



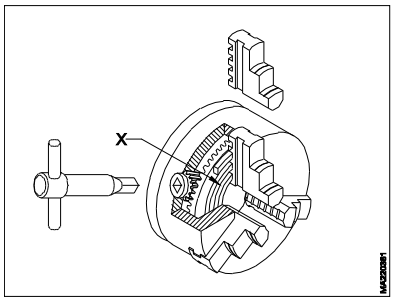
A Keyway
B Finger pin
C Key socket
D Reversible jaw

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



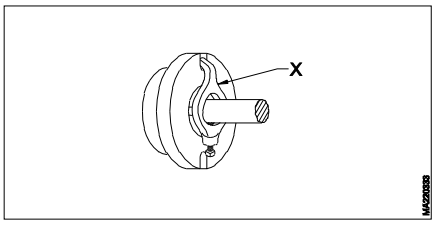
A Crown wheel
B Back plate
C Scroll
D Body

4 What is the name of the part marked as 'X'?



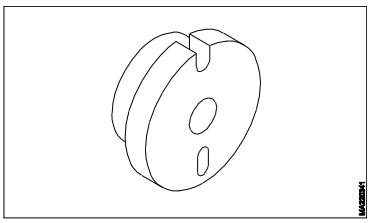
A Body
B Scroll
C External Jaw
D Internal Jaw

5 What is the name of the part marked as 'x'?



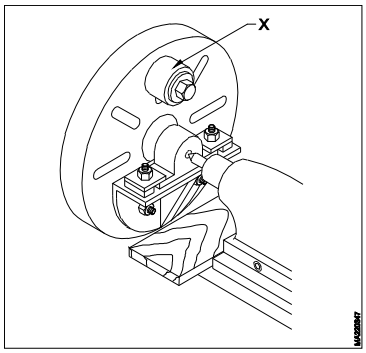
A Work
B Drive plate
C Bent tail carrier
D Square head set screw

6 What is the name of the part?



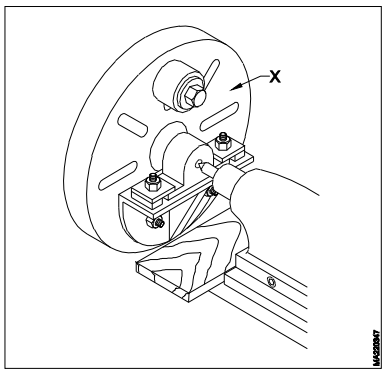
A Face plate
B Catch plate
C Drive plate
D Safety driving plate

7 What is the name of the part marked as 'X'?



A Face plate
B Work piece
C Angle plate
D Counter weight

8 What is the name of the part marked as 'X'?



A Face plate
B Work piece
C Angel plate
D Counter weight

9 What is the name of the operation in a lathe for removing the metal from the work piece by feeding the tool at right angles to the axis of the work?
A Facing
B Knurling
C Step turning
D Plain turning

10 Which lathe operation the bevelling of edge of cylinder or a bore to definite length?
A Boring
B Facing
C Chamfering
D Plain turning

11 Which type of knurling tool has got one roller right hand helical teeth and others have left hand helical teeth?
A Cross knurling
B Concave knurling
C Straight knurling
D Diamond knurling

12 What is the accuracy of vernier bevel protractor?
A 0.5 degree
B 1 degree
C 5 seconds
D 5 minutes

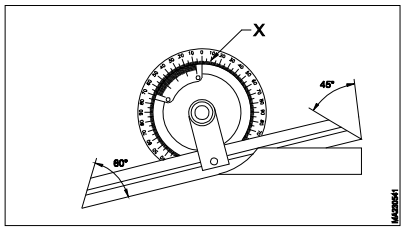
13 Which part of the vernier bevel protractor is circular in shape and the edge is graduated in degrees?
A Dial
B Disc
C Blade
D Stock

14 Which part of the vernier bevel protractor is attached to disc?
A Disc
B Blade
C Stock
D Vernier scale

15 Which part of the vernier bevel protractor is having parallel groove in the centre?
A Dial
B Disc
C Blade
D Stock

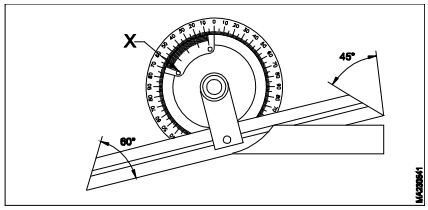
16 What is the formula to find out the least count of vernier bevel protractor?
A 1 MSD – 1 VSD
B 1 MSD – 2 VSD
C 2 MSD – 1 VSD
D 2 MSD – 2 VSD

17 What is the name of the part marked as ‘X’?



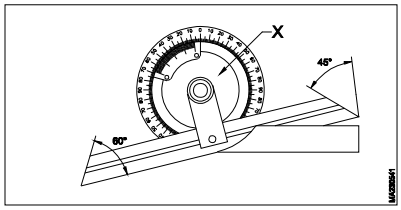
A Dial
B Stock
C Main scale
D Vernier scale

18 What is the name of the part marked as ‘X’?



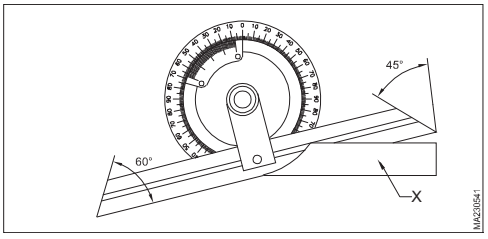
A Disc
B Stock
C Vernier scale
D Adjustable blade

19 What is the name of the part marked as ‘X’?



A Disc
B Stock
C Vernier scale
D Adjustable blade

20 What is the name of the part marked as ‘X’?



A Main scale
B Stock
C Vernier scale
D Adjustable blade

Questions: Level 2

1 Which form of thread is used in 4 Jaw chuck for adjusting the Jaws?

A Vee thread
B Acme thread
C Square thread
D Buttress thread

2 What is the type of chuck mainly employed to hold irregular jobs?

A Collet chuck
B Magnetic chuck
C Three Jaw chuck
D Two Jaw concentric chuck

3 Which type of chuck has the ability to centre the work automatically and maintain accuracy for long period?

A Collet chuck
B Four jaw chuck
C Magnetic chuck
D Three jaw chuck

4 How much will be the depth to cut while finishing the facing in a lathe?

A Not more than 0.1 mm
B Not more than 0.2 mm
C Not more than 0.3 mm
D Not more than 0.4 mm

5 Which lathe operation the job will be the same diameter throughout the length of job?

A Facing
B Chamfering
C Step turning
D Plain turning

6 Which process of lathe operation on existing drilled or core hole will be enlarging and truing?

A Boring
B Grooving
C Chamfering
D Centre drilling

7 Which lathe operation raises the diameter to a small range to get a press fit on assembling?

A Boring
B Grooving
C Knurling
D Chamfering

8 Which lathe operation is intended for generating concave and convex profile on the work piece?

A Facing
B Chamfering
C Form turning
D Taper turning

9 What lathe operation is manly used on the handles to provide better grip for handling purposes?

A Facing
B Chamfering
C Form turning
D Taper turning

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

A Disc
B Oral
C Blade
D Stock

11 Which point of vernier bevel protractor is pivoted to the dial and can be rotated through 360°?

A Dial
B Disc
C Blade
D Stock

Questions: Level 3

1 What will happen in the tool is not clamped rigidly while facing in a lathe?

A Convex face
B Concave face
C Correct face
D Pip at the centre

2 What will happen if the carriage is not being locked while facing in a lathe?

A Convex face
B Concave face
C Correct face
D Pip left at centre

3 What will happen if the blunt cutting edge of the tool is used while facing in a lathe?

A Convex face
B Concave face
C Correct face
D Pip left at centre

4 How the face will be if the tool is not set to the correct centre height while facing in a lathe?

A Pip at the centre
B Concave face
C Correct face
D Convex face

Module 3 : Turning - 2. Work Holding Device and Lathe Operation - Key paper

Questions: Level 1

SL.No	Key
1	A
2	D
3	A
4	B
5	C
6	B
7	D
8	A
9	A
10	C
11	D
12	D
13	A
14	D
15	C
16	C
17	C
18	C
19	A
20	B

Questions: Level 2

SL.No	Key
1	C
2	D
3	A
4	A
5	D
6	A
7	C
8	C
9	C
10	D
11	B

Question: Level 3

SL.No	Key
1	B
2	A
3	A
4	A

Machinist - 1st Semester - Module 3 : Turning - 3.Taper Turning, Thread Cutting and Sine Bar

Questions: Level 1

1 What is the formula to find out the angle of taper?

A $\text{Tan}^\circ = \frac{d - D}{2xl}$

B $\text{Tan}^\circ = \frac{d - D}{l}$

C $\text{Tan}^\circ = \frac{D - d}{2xl}$

D $\text{Tan}^\circ = \frac{D - d}{l}$

2 What is ratio of standard pin tapers used in taper pins?

A 1:30
B 1:40
C 1:50
D 2:30

3 Which element of taper is expressed by number in metric taper?

A Length
B Big diameter
C Small diameter
D Angle of taper

4 What is the ratio of amount of standard pin taper in British system?

A 1:20
B 1:48
C 1:50
D 1:100

5 What are the ranges of morse tapers used on taper shank twist drills, reamers and lathe centres?

A 0 to 4
B 0 to 5
C 1 to 4
D 1 to 5

6 What type of standard taper used on external taper of lathe spindle nose?

A Jarno taper
B Morse taper
C Metric taper
D Brown and sharp taper

7 What is the formula to find the angle at which the compound rest is to set for taper turning?

A $\text{Tan}\theta = \frac{D - d}{2l}$

B $\text{Tan}\theta = \frac{D - d}{2L}$

C $\text{Tan}\theta = \frac{D - d}{l}$

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

8 What is the included angle of metric acme thread?

A 30°
B 29°
C 24°
D 20°

9 What is the formula for finding depth of square thread?

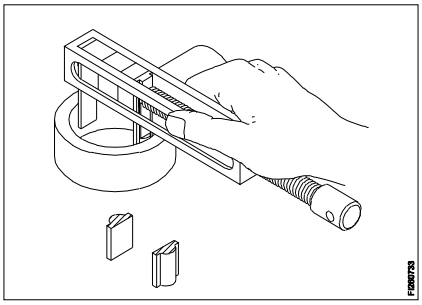
A $\text{Depth} = \frac{1}{TPI}$

B $\text{Depth} = \frac{0.5}{TPI}$

C $\text{Depth} = TPI$

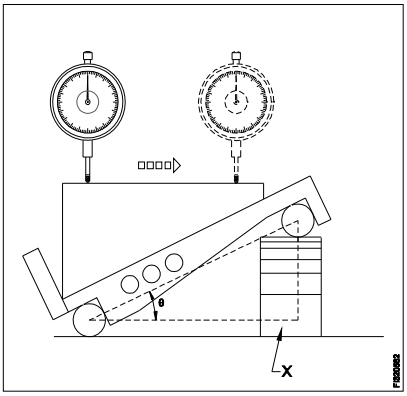
D $\text{Depth} = \frac{TPI}{0.5}$

10 What is the name of measuring instrument?



A Slip gauges along with the special jaw
B Threaded clamp type divider
C Parallel jaw caliper
D Vernier caliper

11 What is the name of part marked as ‘x’?



A Sine bar
B Slip gauge
C Dial gauge
D Datum surface

12 What is the taper ratio for a taper length of 20 units the difference in diameter is one unit?

A 1:15
B 1:20
C 2:15
D 3:20

13 What is the formula to calculate the amount of taper in the tailstock offset method?

A $\frac{(D-d)}{2} \times \frac{l}{L}$

B $\frac{(d-D)}{2} \times \frac{l}{L}$

C $\frac{(D+d)}{2} \times \frac{l}{L}$

D $\frac{(D-d)}{2} \times \frac{L}{l}$

Questions: Level 2

1 Which taper is most commonly used as standard taper in industries?

A Jerno taper
B Morse taper
C Metric taper
D Brown & Sharpe taper

2 Which standard tapers used in milling machine arbors?

A Jarno taper
B Morse taper
C Metric taper
D Brown and sharp taper

3 Which method of taper turning the taper length is limited to movement of the top slide?

A Form turning
B Tailstock offset method
C Compound rest method
D Taper turning attachment

4 Which method of taper turning is possible when the work is hold between centres only?

A Form tool method
B Compound rest method
C Tailstock offset method
D Taper turning attachment method

5 Which one of the following taper turning method can be used for cutting internal taper with power feed?

A Combination of feeds
B Tail stock off set method
C Taper turning attachment
D Compound rest swivelling method

6 What is direction of tool movement with reference to the axis in the tailstock offset method?

A Parallel
B Inclined at $45°$
C Inclined at $60°$
D Perpendicular

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

A Good surface finish
B Lengthy taper can be produced
C Job can be held between centres
D Power feed can be given for both internal and external taper

8 Which micrometer is used to measure the effective diameter of the threads?

A Depth micrometer
B Inside micrometer
C Outside micrometer
D Screw thread micrometer

9 Which determines the size of the wire in the three wires method of thread measurement?

A Flank form
B Micrometer spindle
C Effective diameter
D Pitch of the thread

10 What measurement is taken from the screw thread measurement?

A Major diameter
B Minor diameter
C Pitch diameter
D Effective diameter

11 What is 'Best wire' in thread measurement?

A Contact at root
B Contact at crest
C Contact is at pitch line
D Contact above pitch line

12 Find out gears required to cut 3 mm pitch in a lathe having a lead screw of 6 TPI gears available from 20 to 120 teeth by 5 teeth with a special gear of 127 teeth?

$$\left(\text{Gear ratio} = \frac{DR}{DN} = \frac{5}{127} \text{ x } \frac{\text{Lead of work}}{\text{Lead of Lead screw}}\right)$$

A $\frac{50}{127}$
B $\frac{70}{127}$
C $\frac{80}{127}$
D $\frac{90}{127}$

13 What is the width of flat of square thread having pitch of 6 mm.

A 6 mm
B 4 mm
C 3 mm
D 2 mm

14 What is depth of square thread having 6 mm pitch?

A 6 mm
B 4 mm
C 3 mm
D 2 mm

15 What will be the turn diameter of work piece for acme thread cutting?

A Equal to major dia
B Equal to minor dia
C 0.05 mm over size of major dia
D 0.05 mm under size of major dia

16 The grade of slip gauges are used for general workshop application is?

A Grade I accuracy
B Grade 'O' accuracy
C Grade 'OO' accuracy
D Grade 2 accuracy

17 What material is used to make slip gauge blocks?

A High graded steel
B High carbon steel
C Low graded steel
D Tool steel

18 How many grades of slip gauges recommended as per IS 2984?

A 5
B 4
C 2
D 3

19 What are the grades available in slip gauge?

A Grade 1,2,3
B Grade I,II,III
C Grade 00,0,1,2
D Grade ∇ ∇∇ ∇∇∇

20 What grade of slip gauge used calibration of inspection?

A Grade '0' accuracy
B Grade 2 accuracy
C Grade 1 accuracy
D Grade 00 accuracy

21 What grade of slip gauge used for precision tool room applications?

A Grade '0' accuracy
B Grade 2 accuracy
C Grade 1 accuracy
D Grade '00' accuracy

22 How do you protect slip gauge from rust?

A Apply oil
B Apply kerosene
C Apply wax
D Apply petroleum jelly

23 What material is used to clean the slip gauge before use?

A Petroleum jelly
B Carbon tetrachloride
C Lubricant oil
D Acid free Vaseline

Questions: Level 3

1 Why it is consedering that taper turning attachment is most suitable to turn duplicate tapers?

A Power feed can be given
B Lengthy taper can be produced
C Job can be held in between centres
D The change in length of the job doesn't affect taper

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

$$\left(\text{Gear ration} = \frac{DR}{DN} = \frac{5}{127} \text{ x } \frac{\text{Lead of work}}{\text{Lead of lead screw}}\right)$$

A 60 teeth gear is driver, 127 teeth gear is driven
B 75 teeth gear is driver, 127 teeth gear is driven
C 80 teeth gear is driver, 127 teeth gear is driven
D 90 teeth gear is driver, 127 teeth gear is driven

3 Calculate the gears required to cut a 1.5mm pitch in a lathe having a lead screw of 5mm pitch?

A Driver 30, Driven 50
B Driver 30, Driven 100
C Driver 100, Driven 30
D Driver 100, Driven 60

4 The act of joining the slip gauges together while building up to the sizes is called.

A Wringing
B Sliding
C Glazing
D Loading

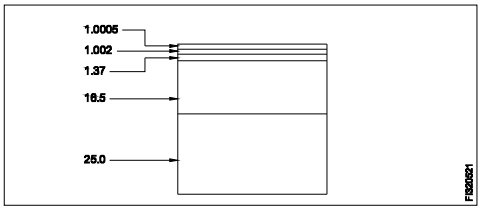
5 Calculate the angle of tapered components the height of the slip gauge is 84.52 mm, the length of the sine bar is 200 mm.

A 25°
B 28°
C 31°
D 22°

6 What is the procedure to built up the slip gauge for particular dimension?

A Start wringing with the small slip gauge
B Maximum number of block
C Minimum number of block
D Built with grade '0' accuracy

7 What is the height of slip gauge build up?



A 44.872
B 44.8725
C 44.87
D 44.8

Module 3 : Turning - 3.Taper Turning, Thread Cutting and Sine Bar - Key paper

Questions: Level 1

SL.No	Key
1	C
2	C
3	B
4	B
5	B
6	A
7	A
8	A
9	B
10	A
11	B
12	B
13	A

Questions: Level 2

SL.No	Key
1	B
2	D
3	C
4	C
5	C
6	A
7	D
8	D
9	D
10	D
11	C
12	D
13	C
14	C
15	C
16	D
17	A
18	B
19	C
20	D
21	C
22	D
23	B

Question: Level 3

SL.No	Key
1	D
2	B
3	B
4	A
5	A
6	A
7	B