

Machinist – Semester 3 Module 1: Tool and Cutter grinding

Reviewed and updated on: 01st November 2019 Version 1.1

1 : Which grinding machine is used for sharpening of cutters?

- A** : Surface grinder
- B** : Tool and Cutter grinder
- C** : Pedestal grinder
- D** : Cylindrical grinder

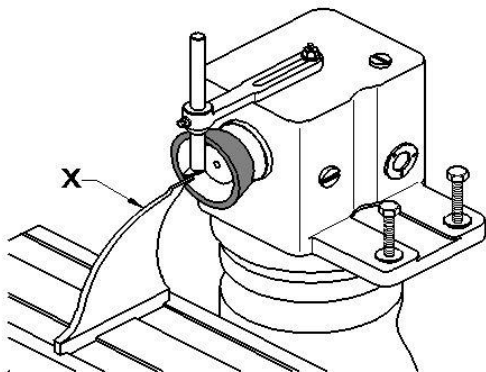
2 : Which material is used to make the base of tool and cutter grinding machine?

- A** : Grey cast iron
- B** : Low carbon steel
- C** : Tool steel
- D** : Bronze

3 : Which part mounted directly on the top of base in tool cutter grinder?

- A** : Column
- B** : Saddle
- C** : Table
- D** : Wheel

4 : What is marked as 'x'?



- A** : Centre gauge
- B** : Feeler gauge
- C** : Pitch gauge
- D** : Snap gauge

5 : Where is tooth rest fitted in tool and cutter grinder?

- A** : Tooth rest attachment
- B** : In between centres
- C** : Tail stock
- D** : Column

6 : Which is the shape of grinding wheel used for sharpening milling cutter and reamer?

- A** : Disc
- B** : Straight cup
- C** : Flaring cup
- D** : Dish

7 : What is the use of work holding device?

- A** : Keep the work piece in a safe distance
- B** : Keep the cutter in a safe distance
- C** : Keep the work piece in position
- D** : Keep the cutter in position

8 : How many number of swivelling movement is provided with universal vice?

- A** : 2
- B** : 3
- C** : 4
- D** : 6

9 : Which tool is used to form the radius on grinding wheel for radius grinding attachment?

- A** : H.S.S single point tool
- B** : Brazed single point tool
- C** : Diamond stick
- D** : H.C.S tool

10 : What is the use of a mandrel?

- A** : For guide the grinding wheel
- B** : For hold the hollow cutters
- C** : For support the wheel head
- D** : For guide the table

11 : What is the angular setting limit of an angular sine vice used in tool and cutter grinder?

- A** : Upto 27°
- B** : Upto 55°
- C** : Upto 80°
- D** : Upto 120°

12 : Which attachment is used for grinding face mill up to 400mm dia?

- A** : Universal vice
- B** : Motor drive arrangement
- C** : Face mill grinding attachment
- D** : Angular sine vice

13 : What is the use of radius wheel turning attachment in tool and cutter grinder?

- A** : Dress the wheel to the required radius up to 25mm
- B** : Turn the work piece to any required shape
- C** : Turn the work piece to a radius up to 12mm
- D** : Dress the wheel to any required shape

14 : Which grinding machine is used for re-sharpening of single point tools, chisel, punches and drills?

- A** : Surface grinder

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- B** : Single purpose tool cutter grinder
C : Cylindrical grinder
D : Universal tool and cutter grinder

15 : What is the maximum swiveling angle of wheel head on a tool cutter grind machine?

- A** : 360°
B : 120°
C : 90°
D : 47°

16 : Which part of the tool and cutter grinding machine on that wheel head is being mounted?

- A** : Base
B : Saddle
C : Table
D : Column

17 : What is the remedy to remove the black and shining face of grinding wheel?

- A** : Changing of wheel
B : Truing of wheel
C : Dressing of wheel
D : Balancing of wheel

18 : Why centre gauge is provided on tool and cutter grinding?

- A** : For centering the wheel spindle and cutter edges
B : For align the table to the spindle axis
C : For reduce the wheel speed
D : For fast metal removal

19 : Which part is used to support each individual tooth of cutter in correct position on tool and cutter grinder?

- A** : Compound rest
B : Steady rest
C : Tool rest
D : Tooth rest

20 : What happened if tool little clearance is provided on milling cutter?

- A** : Chattering produced
B : No heat produced
C : Good surface finish
D : Bad surface finish

21 : What is the recommended range of secondary clearance angle on milling cutter?

- A** : 1° to 3°

- B** : 4° to 7°
C : 8° to 12°
D : 15° to 25°

22 : What is the recommended range of clearance angle for H.S.S cutter while milling cast iron?

- A** : 28° to 37°
B : 15° to 25°
C : 4° to 7°
D : 1° to 5°

23 : Which work holding device is used on tool and cutter grinder for grinding the periphery and bevelled edges on it?

- A** : Face mill grinding attachment
B : Taper turning attachment
C : Slotting attachment
D : Grinding attachment

24 : Which attachment is designed for holding work to any desired compound angle?

- A** : Universal vice
B : Angular sine vice
C : Positive indexing attachment
D : Motor drive arrangement

25 : Which grinding attachment is specially designed for enable the work up to a length of 750 mm?

- A** : RH and LH extension tail stock
B : Universal vice
C : Positive indexing attachment
D : Tap relieving sharpening attachment

26 : Which attachment is designed for grinding the land of a tap?

- A** : Radius wheel turning attachment
B : Angular sine vice
C : Tap relieving and Sharpening attachment
D : Milling attachment

27 : Which attachment is used for precision grinding of angular parts?

- A** : Motor drive attachment
B : Positive indexing attachment
C : Universal vice
D : Angular sine vice

Machinist – Semester 3 Module 2: Milling operations, Measuring and Checking tools and Geometrical tolerances

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28 : Which letter used for represent for datum for indicating geometrical tolerance?

- A : G
- B : M
- C : B
- D : A

29 : What is the definition of "GD and T"?

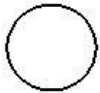
- A : Geometrical Deviations and Tolerances
- B : Geometrical Dimensioning and Tolerances
- C : Geometrical Drawing and Techniques
- D : Geometrical Drawing and Tolerances

30 : What is the symbol used for to check the flatness?

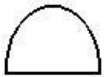
A :



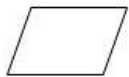
B :



C :



D :



31 : What is the accuracy of depth micrometer?

- A : 0.5 mm
- B : 0.001 mm
- C : 0.01 mm
- D : 0.05 mm

32 : Which work holding device is used for profile milling of cam?

- A : Swivel base vice
- B : Circular table attachment
- C : Bolt and Nuts
- D : Fitting vice

33 : What is the pitch of spindle screw in depth micrometer?

- A : 0.5 mm
- B : 0.001 mm

C : 0.01 mm

D : 0.05 mm

34 : Which type of micrometer does not require zero error correction?

- A : Tube micrometer
- B : Ball micrometer
- C : Stick micrometer
- D : Digital micrometer

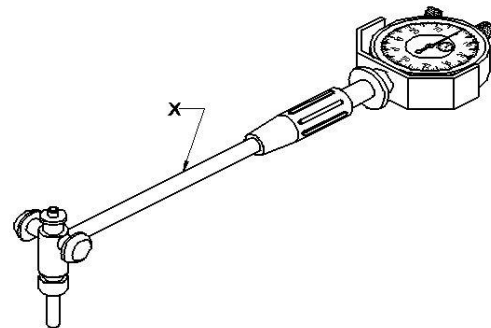
35 : What is pitch of M12 tap?

- A : 1.50 mm
- B : 1.75 mm
- C : 1.25 mm
- D : 1.00 mm

36 : What is used to measure different holes accurately with bore dial gauge?

- A : Graduations on the dial
- B : Inter changeable measuring rods
- C : Sliding plunger
- D : Centering shoes

37 : What is the part marked as 'X'?



- A : Avil
- B : Stem
- C : Plunger
- D : Centring shoes

38 : Which type of milling machine is used for spot facing?

- A : Horizontal milling machine
- B : Vertical milling machine
- C : Pantograph milling machine
- D : Planetary milling machine

39 : What is the use of telescopic gauge?

- A : To measure depth of holes
- B : To measure slot depth

Machinist – Semester 3 Module 2: Milling operations, Measuring and Checking tools and Geometrical tolerances

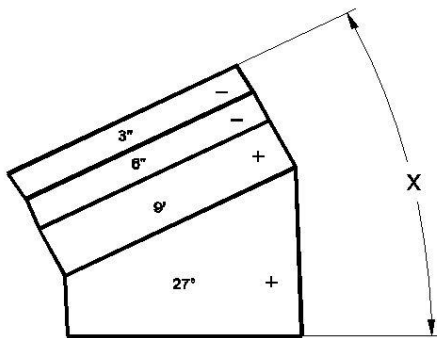
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- C : To measure size of hole slots and recesses
 D : To measure counter bore depth

40 : What is the use of thread ring gauge?

- A : Check the internal thread
 B : Check the external thread
 C : Check the thread length
 D : Check the internal diameter

41 : What is the size of angle?

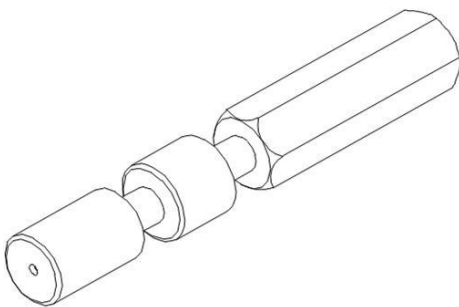


- A : 27° 8' 9"
 B : 26° 8' 9"
 C : 27° 8' 5"
 D : 27° 9' 9"

42 : What is the shape of angle gauge?

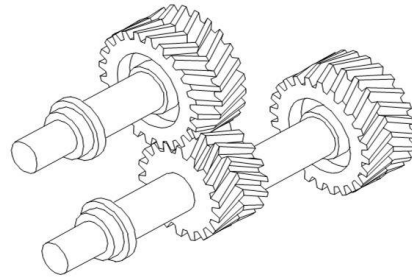
- A : Square
 B : Wedge
 C : Rectangle
 D : Cylinder

43 : What is the type of gauge?



- A : Ring gauge
 B : Double ended plug gauge
 C : Thread plug gauge
 D : Progressive plug gauge

44 : What is the type of gear?

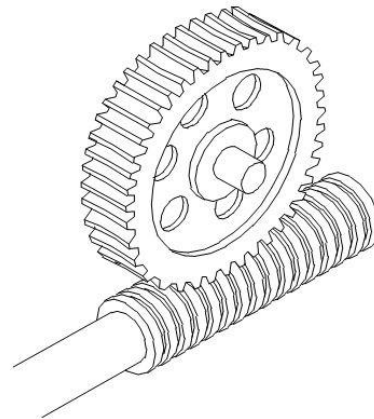


- A : Helical gears
 B : Spur gear
 C : Mitre gear
 D : Herring bone gear

45 : What is the unit of module in spur gear?

- A : Microns
 B : Centimeter
 C : Millimeter
 D : Meter

46 : What is the name of gear drive?



- A : Rack and Pinion
 B : Bevel and Mitre gear
 C : Worm and Worm gear
 D : Herring bone gear

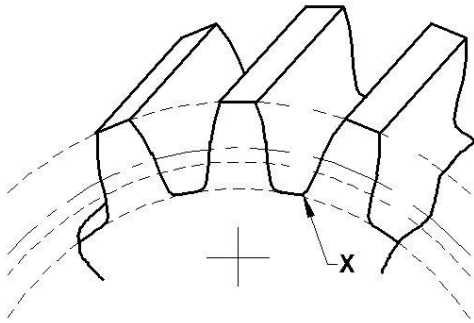
47 : What is the height of tooth in spur gear?

- A : Addendum
 B : Dedendum
 C : 2 x Addendum
 D : Addendum + Dedendum

Machinist – Semester 3 Module 2: Milling operations, Measuring and Checking tools and Geometrical tolerances

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48 : What is marked as 'X'?



- A : Fillet
- B : Pitch circle
- C : Addendum circle
- D : Pitch radius

49 : Which type of group the squarness comes under in geometrical tolerance?

- A : Location
- B : Form
- C : Datum line
- D : Attitude

50 : How to identify and indicate the geometrical tolerance?

- A : Numbers
- B : Alphabets
- C : Decimals
- D : Symbols

51 : What is the use of depth micrometer?

- A : Check the width of slots
- B : Check the depth of blind holes
- C : Check the dia of holes
- D : Check the diameter of thin rods

52 : Which mechanism used to rotate the circular table?

- A : Rack and Pinion mechanism
- B : Bevel gear mechanism
- C : Pawl and Ratchet mechanism
- D : Worm and Worm wheel mechanism

53 : What is the uses of screw thread micrometer?

- A : Measure major diameter
- B : Measure pitch diameter
- C : Measure minor diameter
- D : Measure thickness of threads

54 : Which type of micrometer designed to measurement of longer internal length?

- A : External micrometer
- B : Outside micrometer
- C : Inside micrometer
- D : Stick micrometer

55 : How to set the zero before taking the measurement in micrometer?

- A : Use micrometer
- B : Use vernier micrometer
- C : Setting rings and Slip gauge
- D : Angle gauges

56 : How many sets available in telescopic gauge?

- A : 8
- B : 10
- C : 6
- D : 5

57 : What are the sizes available in telescopic gauges as per mitutyo series 155?

- A : 12 mm to 130 mm
- B : 20 mm to 175 mm
- C : 5 mm to 120 mm
- D : 8 mm to 150 mm

58 : What is the range of sizes in feeler gauges as per IS: 3179?

- A : 0.001 to 0.05 mm
- B : 0.01 to 0.3 mm
- C : 0.03 to 1.00 mm
- D : 0.02 to 0.75 mm

59 : How much tolerance is maintained to make gauges comparing job tolerance?

- A : One - Tenth
- B : One - Fifth
- C : One - Hundredth
- D : One - Eight

60 : How much depth cut is applied to finish cut in slot milling?

- A : 0.4 to 0.5 mm
- B : 0.6 to 0.8 mm
- C : 0.5 to 1.0 mm
- D : 0.5 to 0.75 mm

Machinist – Semester 3 Module 2: Milling operations, Measuring and Checking tools and Geometrical tolerances

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- 61** : How can you check the width of keyways?
A : Depth micrometer
B : Vernier caliper inner jaw
C : Out side micrometer
D : Bore dial gauge
-

- 62** : What types of gear is are in automotive differential gear boxes?

- A** : Worm and Worm gear
B : Rack and Pinion gear
C : Hypoid gear
D : Angular gear
-

Machinist – Semester 3 Module 3: Rack, Spur gear milling, Boring and Checking gear tooth

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63 : Which mechanism is used to convert rotary motion into reciprocating motion?

- A** : Worm and Worm gear
- B** : Helical gear set
- C** : Bevel gear and Hypoid gear
- D** : Rack and Pinion

64 : How the pitch of a rack is specified?

- A** : In addendum
- B** : In depth
- C** : In linear
- D** : In module

65 : Where is rack milling attachment fixed on a milling machine?

- A** : Between the knee and Elevation screw
- B** : Between the face of the column and Arbor support
- C** : Between the saddle and Knee
- D** : Between the column and Knee

66 : Which part has the movable jaw of gear tooth vernier caliper?

- A** : Vertical sliding head
- B** : Horizontal sliding
- C** : Fine adjustment head
- D** : Vertical slide blade

67 : Which instrument is very similar to the principle of a vernier caliper?

- A** : Micrometer
- B** : Bevel protractor
- C** : Gear tooth vernier caliper
- D** : Steel rule

68 : What is the addendum of gear teeth?

- A** : Distance between outside circle to pitch circle
- B** : Distance between outside circle to root circle
- C** : Distance between pitch circle to root circle
- D** : Distance between outside to bottom point of gear

69 : What is the least count of gear tooth vernier caliper?

- A** : 0.1 mm
- B** : 0.01 mm
- C** : 0.2 mm
- D** : 0.02 mm

70 : Which instrument is used to check the chordal addendum of a gear teeth?

- A** : Screw gauge
- B** : Vernier caliper
- C** : Gear tooth vernier caliper
- D** : Feeler gauge

71 : What is the use of sector arm on dividing head?

- A** : Lock the index crank in position
- B** : Eliminate counting holes each time
- C** : Fix the index plate on its correct location
- D** : Avoid the back lash of worm and Worm wheel

72 : How many turns of index crank is required for one complete turn of index head spindle?

- A** : 20
- B** : 28
- C** : 40
- D** : 46

73 : Where the index crank is fixed on index head?

- A** : Sector arm
- B** : Index plate
- C** : Worm shaft
- D** : Worm gear

74 : What kind of material is used to produce a template?

- A** : Good quality iron tube
- B** : Good quality round rod
- C** : Good quality copper sheet
- D** : Good quality steel sheet

75 : What is the use of template?

- A** : Checking the contour of component
- B** : Checking the length of component
- C** : Checking the weight of component
- D** : Checking the width of component

76 : What is the use of radius gauge?

- A** : For check internal and external radius of job
- B** : For check the gap between two sliding surfaces
- C** : For identify the accuracy of joining parts
- D** : For measure the diameter of jobs

Machinist – Semester 3 Module 3: Rack, Spur gear milling, Boring and Checking gear tooth

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77 : How a vertical milling machine can be identified?

- A : According to the axis of table movement
- B : According to the axis of knee movement
- C : According to the axis of spindle rotation
- D : According to the position of column

78 : Which type of machine is used to produce a T-slot in machine tools table?

- A : Lathe
- B : Horizontal milling
- C : Vertical milling
- D : Drilling machine

79 : Which part of vertical milling that can be used for lift the knee?

- A : Vertical head
- B : Table lead screw
- C : Elevating screw
- D : Front brace

80 : Which machine used for boring, key way cutting and profile milling can be done?

- A : Lathe machine
- B : Shaping machine
- C : Vertical milling machine
- D : Horizontal milling machine

81 : How angular boring is done using a vertical milling machine?

- A : Swivelling the machine vice
- B : Swivelling the table
- C : Swivelling the spindle head
- D : Swivelling the column

82 : What type of cutter holding device is generally used on vertical milling machine?

- A : Collet chuck
- B : Long arbor
- C : Clapper block
- D : Taper sleeve

83 : Which type of machine is generally used for wood ruff key way cutting?

- A : Shaper
- B : Slotter
- C : Vertical milling
- D : Horizontal milling

84 : Which machine is provided with the over arm support for reduce chattering?

- A : Vertical milling machine
- B : Shaping machine
- C : Horizontal milling machine
- D : Slotting machine

85 : Which formula is used to find out the linear pitch of a rack?

- A : $(A-Z)40$
- B : πm
- C : $40/z$
- D : $\pi m/2$

86 : How length of rack is calculated?

- A : Linear pitch x Number of teeth
- B : Module x Number of teeth
- C : $2.25 \times \text{module}$
- D : $\pi \times \text{Module}$

87 : Which formula is used to calculate chordal addendum of a gear tooth?

- A : πm
- B : mZ
- C : $mZ \sin(90/z)$
- D : $(Z + 2) M$

88 : Which part of a gear tooth vernier caliper is used to set the addendum height?

- A : Vertical slide with blade
- B : Horizontal slide with movable jaw
- C : Vertical slide and fixed jaw
- D : Graduated vertical beam and fixed jaw

89 : How to find the out side diameter of a spur gear having number of teeth is 'Z' and module 'm'?

- A : $OD = Z/m$
- B : $OD = (Z-2) / m$
- C : $OD = (Z - 2)m$
- D : $OD = (Z + 2)m$

90 : What formula is applied for calculate the pitch diameter of a spur gear tooth?

- A : $Z \times m$
- B : $(Z + 2) m$
- C : $Z \times m/2$
- D : $7/6 \times m$

91 : How many hole circle is suitable for indexing 48 division in index plate?

Machinist – Semester 3 Module 3: Rack, Spur gear milling, Boring and Checking gear tooth

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- A** : 18
B : 20
C : 23
D : 29
-

92 : Which formula is used to find the gear ratio for differential indexing?

- A** : $(N \times 40) \times A$
B : $(A-N) \times 40/A$
C : $2A \times 40/A$
D : $(A - N) \times 40A$
-

93 : How many degree is possible to swive on the vertical head of a vertical milling?

- A** : 15°
B : 25°
C : 35°
D : 45°
-

94 : Which feed is given while sliding the column in vertical milling?

- A** : Circular feed
B : Cross feed
C : Longitudinal feed
D : Vertical feed
-

95 : Which machine the spindle can be moved up an down?

- A** : Vertical milling machine
B : Horizontal milling machine
C : Lathe machine
D : Shaping machine
-

96 : Why micro cartridges are used on boring bar in vertical milling machine?

- A** : Final adjustment of tool
B : Useful for fast roughing of bore
C : Useful for large hole drilling
D : Useful for step boring easily
-

97 : Why the over arm is provided on horizontal milling machine?

- A** : It reduce the vibration of table while milling
B : It support the other end of arbor
C : It guide the top end of elevating screw
D : It support the knee
-

98 : Which type of cutter holding device is generally used on horizontal milling machine?

- A** : Long arbor
B : Collet chuck
C : Drill chuck
D : Three jaw chuck
-

Machinist – Semester 3 Module 4: Helical gear, Flutes milling and Reamers and Twist drills

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99 : How many elements must be known in cut a helix or a spiral?

- A : 2
- B : 1
- C : 5
- D : 6

100 : What is the line generated by the progress and rotation of a point around a cylinder?

- A : Sprial
- B : Helix
- C : Bevel
- D : Taper

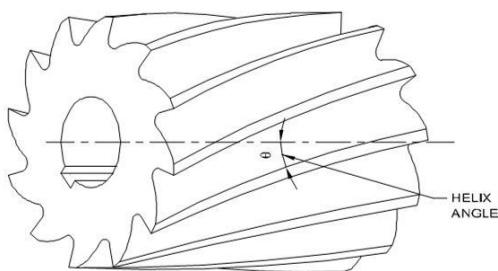
101 : What is the maximum helix angle determined in helical gear?

- A : Obtue angle
- B : Acute angle
- C : Right angle
- D : Reflex angle

102 : Which trigonometric ratio is determined the helix anfg e for helical gear?

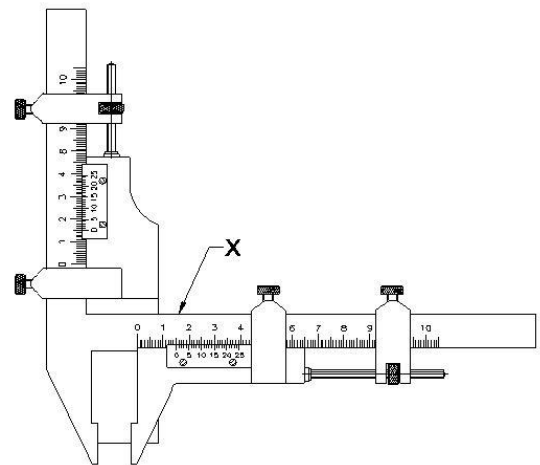
- A : Tan θ
- B : Sin θ
- C : Cosec θ
- D : Cos θ

103 : What is the name of cutter?



- A : Side and Face milling cutter
- B : End mill cutter
- C : Slab milling cutter
- D : Shell and Mill cutter

104 : What is the part marked as 'X'?



- A : Horizontal beam
- B : Vertical beam
- C : Horizontal sliding head
- D : Vertical sliding head

105 : Which type of indexing is used to cut the helical gear?

- A : Direct indexing
- B : Differential indexing
- C : Angular indexing
- D : Simple indexing

106 : What formula is used to determine the selection of cutter number for helical gear?

A :

$$\text{Cutter Number} = \frac{N}{(\cos \alpha)^2}$$

B :

$$\text{Cutter Number} = \frac{(\cos \alpha)^2}{N}$$

C :

$$\text{Cutter Number} = \frac{N}{(\sin \alpha)^3}$$

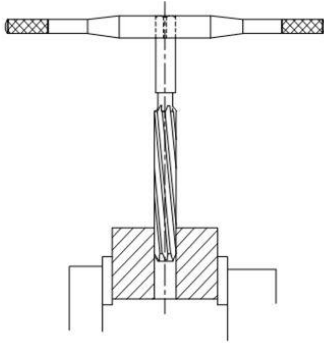
D :

$$\text{Cutter Number} = \frac{N}{(\cos \alpha)^3}$$

Machinist – Semester 3 Module 4: Helical gear, Flutes milling and Reamers and Twist drills

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107 : What is the type of reamer?

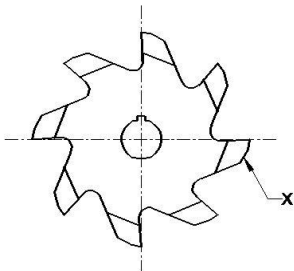


- A : Hand reamer with pilot
- B : Machine reamer
- C : Hand reamer
- D : Jobber reamer

108 : What is ratio of taper pin hand reamer?

- A : 1:50
- B : 1:40
- C : 1:30
- D : 1:20

109 : What is the part marked as 'X'?



- A : Face
- B : Flute
- C : Heel
- D : Cutting edge

110 : Which type of reamer used to finish the holes for fitting taper pins on taper holes?

- A : Taper reamer
- B : Rose reamer
- C : Machine jig reamer
- D : Taper pin machine reamer

111 : Which part is ensure positive drive of the drill from the drill spindle?

- A : Shank
- B : Tang
- C : Neck
- D : Point angle

112 : Where is engraved diameter and other particular of the drill?

- A : Shank
- B : Tang
- C : Neck
- D : Face

113 : Which part is held and driven the drill?

- A : Neck
- B : Tang
- C : Heel
- D : Shank

114 : What is the lip clearance angle in drill?

- A : 15°
- B : 12°
- C : 18°
- D : 118°

115 : Which milling machine is suitable for helical milling?

- A : Horizontal milling machine
- B : Universal milling machine
- C : Pantograph milling machine
- D : Vertical milling machine

116 : When you cut left hand helix which direction must be swivelled the table in the milling machine?

- A : Counter clock wise direction
- B : Clock wise direction
- C : Table tilting downward position
- D : Table at stable condition

117 : Calculate the real module in helical gear the pitch diameter (PD) is 100 mm and number of teeth 19.

- A : 5.00 mm
- B : 0.19 mm
- C : 5.26 mm
- D : 20 mm

118 : Which type of gear is used for high speed running and heavy duty gear drives?

- A : Spur gear
- B : Helical gear
- C : Angular gear
- D : Worm and Worm gear

Machinist – Semester 3 Module 4: Helical gear, Flutes milling and Reamers and Twist drills

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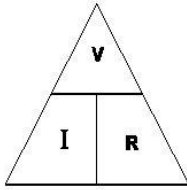
119 : Why reamers have uneven spacing of teeth?

- A** : To be maintain the hole diameter
 - B** : To be cut excessive material
 - C** : To be cut less material
 - D** : To reduce chattering
-

120 : What is the name of the reamer used with several sizes of reamers in with one shank?

- A** : Adjustable machine reamer
 - B** : Reamers with floating holders
 - C** : Shell reamer
 - D** : Chucking reamer
-

121 : Which is the law related to the given figure?



- A : Ohm's law
- B : Krichhoff's law
- C : Faraday's law
- D : Lenz's Law

122 : What is the electrical property of an electrical circuit to oppose any change in the magnitude of current flow?

- A : Conductivity
- B : Inductance
- C : Insulation
- D : Capacitance

123 : Which machine converts electric energy into mechanical rotary motion?

- A : Motor
- B : Generator
- C : Transformer
- D : Solenoid

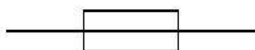
124 : Which component rotates in an electric generator?

- A : Field pole
- B : Brushes
- C : Frame
- D : Armature

125 : Which equipment converts mechanical energy to electrical energy?

- A : D.C. motor
- B : Generator
- C : Transformer
- D : A.C. motor

126 : What is the general electrical symbol?



- A : Switch
- B : Resistor
- C : Fuse
- D : Capacitor

127 : Which accessory acts as switch and fuse?

- A : Isolater
- B : MCB
- C : Fuse
- D : Switch

128 : What is the purpose of LVDT?

- A : Measure current
- B : Measure temperature
- C : Measure voltage
- D : Measure displacement

129 : What is relation or I,V,R according to the Ohm's Law?

- A : $I = V/R$
- B : $I = R/V$
- C : $I = I/VR$
- D : $I = RV/I$

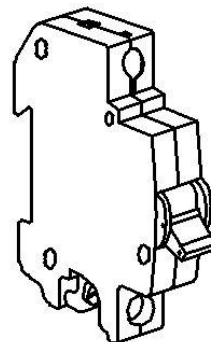
130 : What is the name of the device used to provide inductance in a circuit?

- A : Volt meter
- B : Ammeter
- C : Inductors
- D : Solenoid

131 : Which electrical device detect the fault indication automatically?

- A : Relay
- B : Thermostat
- C : Intermediate switch
- D : Limit switch

132 : What is the name of device?



- A : MCB
- B : ELCB
- C : Relay
- D : Thermostat

133 : What is the expansion of LVDT in sensor?

- A : Linear Variable Differential Transformers

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- B** : Linear Various Differential Transformer
C : Linear Variedly Differential Transformer
D : Low Variable Differential Transformers
-

134 : What is the name of the electro mechanical device having insulated wire wound over a solid iron core?

- A** : Motor
B : Solenoid
C : Transformer
D : Inductor
-

135 : Which rule determines the direction of motion of the conductor in D.C. motor?

- A** : Fleming's right hand rule
B : Fleming's left hand rule
C : Marewells right hand grip rule
D : Cork's screw rule
-

136 : Which law states the working principle of the generator?

- A** : Lenz's law
B : Ohm's law
C : Faraday's law of electro magnetic induction
D : Kirchhoff's law
-

137 : What is the component have the same physical dimensions of MCBs but cannot be used for automatic tripping?

- A** : Fuse
B : Isolator
C : Starter
D : Relay
-

138 : Which is the technology used by photo electric sensors for sensing the target?

- A** : Inductive
B : Capactive
C : Photo electric
D : Ultra sonic
-

139 : Which is the quantity being measured by the strain gauge?

- A** : Vibration
B : Temperature
C : Pressure
D : Sound
-

140 : What is the name of the device used for protecting a circuit against excess current?

- A** : Fuse
B : Switch
C : Alarm
D : Resistor
-

141 : What is the letter symbol for inductance?

- A** : L
B : I
C : F
D : P
-

142 : What is the sensing range of photo electric proximity sensor?

- A** : 4mm - 40mm
B : 3mm - 60mm
C : 1mm - 60mm
D : 3mm - 30mm
-

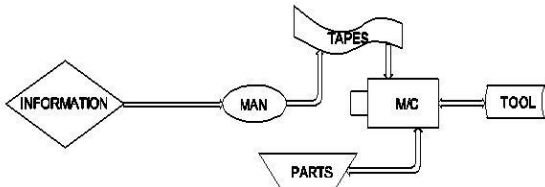
Machinist – Semester 3 Module 6: CNC turning center, Elements, Programming and Operations

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- 143** : Which is general safety in CNC turning?
A : Do not use non standard tools / holders
B : Check the voltage and current
C : Check the chuck function
D : Check the programme control levels

- 144** : What is the safety check on the CNC machine after start?
A : Check the chuck function
B : Check the voltage and current
C : Check the hydraulic tank oil level
D : Check the clamping stock

- 145** : What is the name of machine system?



- A** : Convention
B : Auto tool changers
C : Numerical control
D : Computer numerical control

- 146** : What is the first step to stop CNC machine of an accident happen while working?
A : Switch off regulator
B : Press emergency switch
C : Reset machine
D : Reset regulator

- 147** : Which motor control the axes of CNC machine?
A : Air motor
B : DC series motor
C : Servo motor
D : Hydraulic motor

- 148** : Which mechanism reduces the back lash of CNC lathe?
A : Stopper
B : Clutch
C : Recirculating ball screw with nut
D : Break

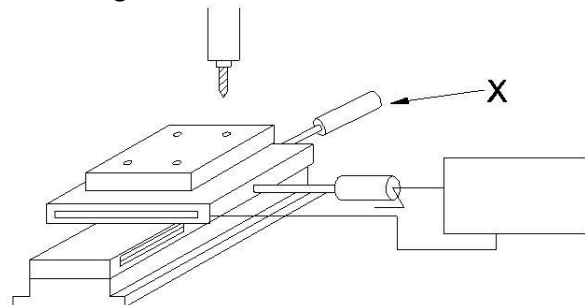
- 149** : What is G04?
A : Linear interpolation
B : CW circular interpolation
C : CCW Circular Interpolation
D : Dwell time

- 150** : 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

- 151** : What is the maximum machining length in a CNC lathe?
A : 320 mm
B : 245 mm
C : 200 mm
D : 340 mm

- 152** : What is the spindle speed range in CNC machine?
A : 40-500 RPM
B : 40-4000 RPM
C : 10-600 RPM
D : 30-1000 RPM

- 153** : What is the name part marked as 'X' in block diagram of CNC machine tool?



- A** : X- axis position transducer
B : Y- axis position transducer
C : X- axis servomotor
D : Y- axis servomotor

- 154** : What types of taper is in the CNC machine spindle?
A : ISO 40
B : Morse taper
C : Jarno taper
D : Pin taper

- 155** : What R denotes as per ISO designation of boring bar S32USKKR12 of CNC lathe?
A : Shank type
B : Clearance angle
C : Tool length
D : Cutting direction

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156 : Which describing machine tool movement in CNC?

- A : G-code
- B : M-code
- C : T-word
- D : S-word

157 : What 'N' of ISO insert tool specifies?

- A : Shape
- B : Grade
- C : Material
- D : Relief angle

158 : What is M8 represent in programs off CPU tapping?

- A : Coolant off
- B : Coolant on
- C : Specific direction
- D : Tapping RH threads

159 : Which code represents in more flexible and suitable for threading longitudinal transverse and tapered thread?

- A : G 76
- B : G 92
- C : G 32
- D : G 34

160 : Which preparatory code should be selected for taper threading cycle?

- A : G 32
- B : G 92
- C : G 76
- D : G 33

161 : Which G-code is used for tapping left hand thread with thread M4 in CNC program?

- A : G 74
- B : G 84
- C : G 28
- D : G 9

162 : What is the composition of stellite tool material?

- A : Cobalt, Chromium and Tungsten
- B : Cobalt, Nickel and Tungsten
- C : Cobalt, Chromium and Nickel
- D : Cobalt, Carbon and Tungsten

163 : Which is the tool selection word is specified?

- A : G-Allowed by 5 digit numbers
- B : F-Allowed by 5 digit numbers
- C : S-Allowed by 5 digit numbers
- D : T-Allowed by 5 digit numbers

164 : What is the expansion of CAD?

- A : Computer Aided Development
- B : Computer Aided Design
- C : Computer Automatic Development
- D : Computer Automatic Design

165 : Which is the disadvantage of NC system?

- A : Accuracy cannot be a change
- B : Increase compound rejection
- C : Skilled operator involves
- D : If tape is spoiled, entire program is affected

166 : Which guide way separate the surface contact between the sliding parts by a thin layer of fluid?

- A : Flat guide way
- B : Vee guide way
- C : Hydrostatic guide way
- D : Dovetail guide way

167 : When the machine moves 25.49 mm for the command X = 25.50 mm, what must be the positional accuracy?

- A : 0.001 mm
- B : 0.01 mm
- C : 0.1 mm
- D : 1 mm

168 : What should be the safety precaution for holding the work piece to the lathe chuck?

- A : Cleaned
- B : Measured
- C : Clamped securely
- D : Polished

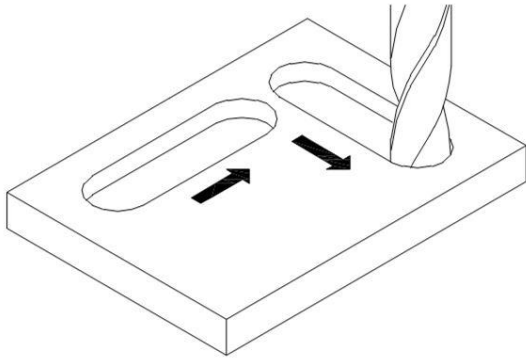
169 : Which part provides linear travel to the tool in CNC lathe?

- A : Lead screw
 - B : Ball screw
 - C : Worm wheel
 - D : Rack and Pinion
-

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170 : Which axis the fore finger indicates in right hand thumb rule?



- A : Y axis
- B : X axis
- C : Z Axis
- D : A axis

171 : What is the control system of the CNC machine?

- A : Straight cut control
- B : 2-D Contouring control
- C : 3-D Contouring control
- D : 2½ D Contouring control

172 : Which quadrant in cartesian co-ordinate will have positive value both in X and Y?

- A : Fourth
- B : Second
- C : Third
- D : First

173 : Which G-code description maximum spindle speed setting?

- A : G50
- B : G71
- C : G72
- D : G42

174 : What is the function of M02 code in part programming?

- A : Programme stop
- B : Optional stop
- C : End of programme execution
- D : Coolant ON

175 : Which code is used for peck drilling in FANUC controller system?

- A : G 80
- B : G 76

- C : G 72
- D : G 74

176 : Which G code describe machine tool movement of grooving cycle?

- A : G 73
- B : G 75
- C : G 92
- D : G 98

177 : What is the function of G 32 code?

- A : Rapid traverse
- B : Linear interpolation
- C : Thread cutting
- D : Circulation interpolation

178 : 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

179 : Which is the programme for depth of cut of 2-5 mm is given?



- A : N003 M0 8 G 01 X -2.5
- B : N004 G 01 Z -2.5
- C : N004 G 01 Z -2.5
- D : N007 G 00 X + 5

180 : Which is the part programme to limit the RPM to 3000?

- A : G 92 S 3000
- B : G 96 N 3000
- C : G 00 T 3000
- D : G 01 S 250

181 : Which common word address used to miscellaneous function in CNC lathe?

- A : N
- B : G
- C : S
- D : M

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182 : Which M-code is defined and implement to spindles stop?

- A : M05
- B : M08
- C : M11
- D : M14

183 : What is the code M11 defined by the machine tool?

- A : Coolant OFF
- B : Coolant ON
- C : Chuck close
- D : Door close

184 : Which code describe the auxiliary function of CNC machine?

- A : N- words
- B : M- words
- C : G- words
- D : T- words

185 : Which is the programme for simple turning operation for the length of -30 mm?

- A : N 008 G 01 Y -2.5
 - B : N 011 G 00 X 020
 - C : N 009 G 01 Z -30
 - D : N 010 G 01 X 5 Z -30
-

186 : Which is the method in avoidance of collisions due to programme?

- A : Full cycle simulation
- B : Reduce motor speed
- C : Give less feed
- D : Reduce cutter speed

187 : What is the feed of CNC machine XYZ axis?

- A : 1 to 2 mm/min
- B : 5 to 50 mm/min
- C : 1 to 1000 mm/min
- D : 1 to 100 mm/min

188 : How many times the cutting speed of ceramic tool is greater than H.S.S?

- A : 20 times
- B : 15 times
- C : 4 times
- D : 42 times

189 : Which device enables crash prevention on different types of CNC machines?

- A : Encoder - dish position sensors
 - B : Servo motor
 - C : Control computer
 - D : Comparator
-

Machinist – Semester 3 Module 7: Program editing, Setting and Simulation

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190 : What is the expansion of MDI in CNC?

- A** : Manual Data Input
- B** : Managing Data Instruction
- C** : Maintain the Data Instruction
- D** : Machine Development in Industry

191 : Which is axis of spindle in CNC lathe?

- A** : X axis
- B** : Y axis
- C** : Z axis
- D** : 4th axis

192 : Which mode allows an operation to check the program by executing only one program block at a time?

- A** : Single block mode
- B** : MDI mode
- C** : Edit mode
- D** : Auto mode

193 : Which is the input of CNC lathe?

- A** : Microphone
- B** : Control panel
- C** : Joy stick
- D** : Mouse

194 : What is 'F' for the given block G01 X20 Y50 F120?

- A** : Function
- B** : Feed back
- C** : Feed
- D** : Frequency

195 : Which is the control developed by Siemens company?

- A** : Usage
- B** : Allen
- C** : Mazatrol
- D** : Sinumeric

196 : What is the simulation process in a CNC machine?

- A** : Planning function
- B** : Implementing function
- C** : Verification activity
- D** : Correcting function

197 : How the simulation take place in CNC machine?

- A** : By hardware device
- B** : Through a software
- C** : Through machined device
- D** : Through electric device

198 : Which offset is used to adjust the machined size become x 40.44mm instead of programmed size x 40.49 reduced 0.04 mm?

- A** : Work offset
- B** : Geometrical offset
- C** : Wear offset
- D** : Tool offset

199 : What is the explanation of program N005G01 X 5Z-30?

- A** : Taper turning for the length of 30 mm
- B** : Tool returns out to its initial position
- C** : Tool is moving towards left by 30 mm
- D** : Against, infeed of 5 mm in given

Machinist – Semester 3 Module 8: Program writing, Tool selection and Execution

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200 : Which traverse 'X' 60 mm as per technical specification of CNC machine?

- A : Saddle movement
- B : Head movement
- C : Column movement
- D : Turret movement

201 : What is the mode to check the effectiveness of the program?

- A : Dry run
- B : Jog mode
- C : Edit mode
- D : Single block mode

202 : Which is the start of program in address / numeric key?

A :



B :



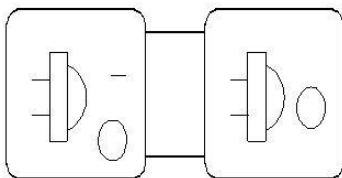
C :



D :



203 : What is the symbol identity?



- A : Spindle stop / Start
- B : Feed stop / Start
- C : Single block
- D : Direction keys

204 : Which designate length of boring bar as per ISO designation?

A : S

B : U

C : 32

D : C

205 : What 'P' designate in turning tool holder as per ISO nomenclature?

- A : Insert clamping method
- B : Insert shape
- C : Holder style
- D : Insert clearance angle

206 : What X,Y indicates in traverse system of program G85 x 60Y28.. R2F120?

- A : Hole position in X axis
- B : Hole position in Y axis
- C : Hole position XY axis
- D : Hole position in X plane

207 : What is terminology distance from the tool zone point on the tool turnout to the tool tip?

- A : Reference point
- B : Machine zero
- C : Zero off set
- D : Tool off set

208 : What is the terminology of the distance from machine zero point to the work origin point?

- A : Reference point
- B : Machine zero
- C : Zero off set
- D : Tool off set

209 : What is the designation of the basic movement of sides are in horizontal, vertical and cross direction?

- A : XYZ
- B : UVW
- C : WXV
- D : VUW

210 : Which is the axis for work offset as measured?

- A : X and Y direction
- B : W and X direction
- C : X and Z direction
- D : Y and W direction

211 : What is the drilling cycle code commands in sinumeric system?

- A : G83
- B : G74

C : G75

D : G84

212 : What does the word Q stand in FANUC system peck drilling cycle syntax as

G 83 X-Y-Z-R-Q-F-K ?

A : Depth

B : Position of R plane

C : Depth of per pass

D : Number of repeates

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

A : G72

B : G75

C : G92

D : G74

ANSWERS :

1:B; 2:A; 3:B; 4:A; 5:A; 6:C; 7:C; 8:B; 9:C; 10:B; 11:B;
12:C; 13:A; 14:B; 15:A; 16:D; 17:C; 18:A; 19:D; 20:D;
21:D; 22:C; 23:A; 24:A; 25:A; 26:C; 27:D; 28:D; 29:B;
30:D; 31:C; 32:B; 33:A; 34:D; 35:B; 36:A; 37:B; 38:B;
39:C; 40:B; 41:C; 42:B; 43:D; 44:D; 45:C; 46:C; 47:D;
48:A; 49:D; 50:D; 51:B; 52:D; 53:B; 54:D; 55:C ; 56:C;
57:D; 58:C; 59:A; 60:A; 61:B; 62:C; 63:D; 64:C ; 65:B;
66:B; 67:C ; 68:A; 69:D; 70:C ; 71:B; 72:C ; 73:C ; 74:D;
75:A; 76:A; 77:C ; 78:C ; 79:C ; 80:C ; 81:C ; 82:A; 83:C
; 84:B; 85:B; 86:A; 87:C ; 88:A; 89:D; 90:A; 91:A; 92:B;
93:D; 94:D; 95:A; 96:A; 97:B; 98:A; 99:A; 100:B;
101:B; 102:D; 103:C; 104:A; 105:B; 106:D; 107:C;
108:A; 109:C; 110:D; 111:B; 112:C; 113:D; 114:B;
115:B; 116:B; 117:C; 118:B; 119:D; 120:C; 121:A;
122:B; 123:A; 124:D; 125:B; 126:C; 127:B; 128:D;
129:A; 130:C; 131:A; 132:A; 133:A; 134:B; 135:B;
136:C; 137:B; 138:C; 139:C; 140:A; 141:A; 142:C;
143:A; 144:A; 145:B; 146:B; 147:C; 148:C; 149:D;
150:C; 151:B; 152:B; 153:D; 154:A; 155:D; 156:A;
157:D; 158:B; 159:D; 160:C; 161:B; 162:A; 163:D;
164:B; 165:D; 166:C; 167:B; 168:C; 169:B; 170:B;
171:B; 172:D; 173:A; 174:C; 175:D; 176:B; 177:C;
178:A; 179:A; 180:A; 181:D; 182:A; 183:C; 184:B;
185:C; 186:A; 187:C; 188:D; 189:A; 190:A; 191:C;
192:A; 193:B; 194:C; 195:D; 196:C; 197:B; 198:C;
199:A; 200:A; 201:A; 202:A; 203:A; 204:B; 205:A;
206:C; 207:D; 208:C; 209:A; 210:C; 211:A; 212:C;
213:B;