

- Q) Tool signature consists of _____ elements.--> **7**
- Q) Drilling is an example of _____ cutting--> **oblique cutting**
- Q) Machining is a--> **removal process**
- Q) Feed rate is expressed in turning operation by--> **mm/revolution**
- Q) The rake angle of a cutting tool--> **controls the chip formation**
- Q) Cemented carbide tipped tools can machine metal even when their cutting elements get heated up to the temperature--> **1000°C**
- Q) Discontinuous chips are formed during machining--> **cast iron**
- Q) Continuous chips are formed when cutting--> **ductile materials**
- Q) Stellite tools can machine metal even when their cutting elements get heated up to the temperature--> **920°C**
- Q) The last element in the tool signature is--> **nose radius**
- Q) A cutting tool can never have its--> **clearance angle negative**
- Q) Tool life is most affected by--> **cutting speed**
- Q) High carbon steel tools can machine metal even when their cutting elements get heated up to the temperature--> **200°-250°C**
- Q) Back rake of a turning tool is measured on its--> **machine transverse plane**
- Q) Serrated chips also called _____--> **nonhomogeneous chips**
- Q) Temperature and their distribution in the cutting zone determined by using _____--> **thermocouples**
- Q) Ceramic tools are made from--> **aluminum oxide**
- Q) Poor surface finish results due to--> **coarse feed**
- Q) The binding material used in cemented carbide tool is--> **cobalt**
- Q) The rake angle of cutting tool--> **controls chip formation**
- Q) Approximate content of tungsten in H.S.S cutting tool material is--> **18%**
- Q) Friction between chip and tool can be reduced by--> **increasing sliding velocity**
- Q) Which of the following tool material has highest cutting speed--> **carbide**
- Q) In orthogonal machining operation, the chip thickness and the uncut chip thickness are equal to 0.45mm. If the tool rake angle is 0° , then shear plane angle is--> **45°**
- Q) In oblique cutting system, the cutting edge of the tool--> **may or may not clear the width of the work piece**
- Q) The magnitude of cutting speed for maximum profit rate must be--> **in between the speed for minimum cost and maximum production rate**
- Q) The angle on which the strength of the tool depends is--> **rake angle**
- Q) The factor responsible for formation of discontinuous chips--> **low cutting speed and small rake angle**
- Q) Chips are broken effectively due to following property--> **strain hardening**
- Q) The correct sequence of cutting tools in the ascending order of their wear resistance is--> **HSS-stellite-carbide-nitride**
- Q) The angle between the side cutting edge and the end cutting edge is known as--> **nose radius**
- Q) Lip angle of a single point tool is of the order of--> **$60-80^\circ$**
- Q) The mechanism responsible for metal cutting is--> **shear**
- Q) The shear angle(ϕ), cutting ratio(r), and rake angle (α) related as--> **$\tan \phi = r \cos \alpha / (1 - r \sin \alpha)$**

- Q)Merchant's first solution relates--> **shear angle, friction angle, and rake angle**
- Q)Which of the following phases gives good machinability in steels and cast irons?--> **ferrite**
- Q)A single point cutting tool with 12° rake angle is used to machine a steel work piece. The depth of cut i.e., uncut chip thickness is 0.81 mm. The chip thickness under orthogonal machining condition is 1.8 mm. The shear angle is approximately--> **26°**
- Q)Which of the following process uses blunt tool?--> **spinning**
- Q)A built up edge is formed while machining--> **ductile material at low speed**
- Q)Friction at the tool chip interface can be reduced by--> **increasing the cutting speed**
- Q)Which of the following is not used for judging machinability?--> **machining time and machining speed**
- Q)Cutting fluid is not used for machining of--> **cast iron**
- Q)If the single point tool signature, the first and middle element indicate (respectively)--> **back rake angle and side relief angle**
- Q)For improving machinability of stainless steel the element added is normally--> **tellurium**
- Q)The carbide tool materials are designated through--> **K,P,M series**
- Q)The first and second hardest materials currently available are respectively--> **diamond and cubic boron nitride(CBN)**
- Q)In the machining of cast irons, the formation of built up edge (BUE)--> **improves tool life**
- Q)The cutting tool materials used when dimensional accuracy and good surface finish are of prime concern is--> **diamonds**
- Q)The lathe bed is made of _____ --> **cast iron**
- Q)Arrangement of tools as per the sequence of operation in a capstan or turret lathe is known as _____ --> **tool layout**
- Q)For setting up of heavy and irregular shaped work the chuck preferred is _____ chuck.--> **four jaw chuck**
- Q)The taper on lathe spindles is--> **1:20**
- Q)In collet the included angle of taper is usually--> **30°**
- Q)The operation of beveling the extreme end of a work piece is known as _____ .--> **chamfering**
- Q)Machinability index is arrived with reference to the machinability of--> **free cutting steel**
- Q)Optimum rake angle of a tool is function of--> **work material properties**
- Q)In lathe machine, the spindle speed will be minimum during--> **Thread Cutting**
- Q)For Turning internal tapers only, the method used is--> **Taper attachment**
- Q)Which of the following standard taper lathe centers have?--> **Morse**
- Q)Irregular objects can be turned by mounting in--> **Independent chuck**
- Q)The power is transmitted by lead screw to carriage through--> **Half nut**
- Q)A Half nut is--> **A Mechanism to lock lathe carriage to lead screw**
- Q)Quality screw threads are produced by--> **Thread chasing**
- Q)The size of lathe is expressed by--> **Swing diameter over the bed**
- Q)In a Centre lathe, the cutting tools fed in with reference to the lathe axis.--> **Both cross and longitudinal direction**
- Q)The swing diameter over the bed is _____ the height Z the centre measured from the bed of the lathe.--> **Twice**
- Q)Tumbler gears in lathe are used to--> **give desired direction of movement of the lathe**

carriage

Q)A mandrels is used to hold--> **Hollow work**

Q)For short and external taper, the method employed is--> **Forming tool**

Q)The compound rest method of turning toppers is employed for--> **Steep and short tapers**

Q)The movement of various slides and stock feeding on screw machines are obtained by the action of--> **Cam**

Q)Under cutting is an operation--> **Cutting a groove next to shoulder**

Q)Chamfering is an essential operation after--> **Thread cutting**

Q)The lead screw of lathe has _____ Threads--> **Single start**

Q)A right hand tool on a lathe cuts most effectively when it travels--> **From right to left end of the lathe bed.**

Q)A left hand tool on a lathe cuts most effectively when it travels.--> **From left to right end of the lathe bed.**

Q)A Lathe with four steps on to the cone pulley and with back gears will have.--> **Four Direct and form indirect speeds**

Q)The lathe guide ways are of--> **Any one of the above.**

Q)For turning small tapers on long work piece the suitable methods--> **By setting over the tail stock**

Q)For turning internal tapers, the suitable method only--> **By a taper turning attachment**

Q)Lathe spindle has got--> **External Threads**

Q)Which of the following operations requires that the cutting edge of a tool bit be placed exactly on the work Centre line?--> **Facing**

Q)In a lathe, the carriage and tail stock are guided on--> **Different guide way**

Q)In order to achieve a specific surface finish in single point turning, the most important factor to be controlled.--> **Cutting speed**

Q)The cutting speed is maximum while machining _____ with a HSS tool--> **Aluminum**

Q)The cutting speed is minimum while machines _____ with a HSS--> **Cast iron**

Q)An operation of embossing a diamond shaped pattern on the surface of a work piece is known as--> **Knuckling**

Q)The spindle speeds of machine tools are usually designated to follow.--> **geometrical progression**

Q)The best machine for mass production of watch components machined from bar will be--> **multi spindle automatic lathe**

Q)A Good lubricant for threads cutting operations is--> **Mineral lard oil**

Q)If L be the length of job , D its diameter, F feed and N the spindle speed, then time for turning of the job equal to--> **L / FN**

Q)Internal or external taper on a turret lathe can be turned by--> **Taper turning attachment**

Q)The purpose of charging dial on lathe is to achieve--> **Picking with thread accurately at the beginning of each cut**

Q)No lubricant is required when cutting thread--> **Brass or Cast iron**

Q)On screw machining having cross and vertical slides cutting off operations and usually performed by the--> **Vertical slide**

Q)Trepanning is performed for--> **Producing a large hole without drilling**

Q)If the diameter of a job being machined on lathe is doubled speed halved, the cutting time

will be--> **Four time**

Q)In automatic machine where large number of components are machined from a bar, is held in--> **Collet chuck**

Q)On bar type turned lathes, work to be machined is gripped in--> **Collet chuck**.

Q)In a capstan lathe, the turret is mounted on--> **A short slide of ram sliding on the saddle**

Q)In a turret lathe, the turret is mounted on--> **The saddle sliding with bed**

Q)Enlarging an existing hole with a rotating single point tool is called--> **Boring**

Q)In reaming process--> **High dimensional accuracy is obtained**

Q)Tapes, drills and reamers etc. are made by--> **HSS**

Q)The time taken to drill a hole through a 25mm thick plate with the drill rotating at 300 rpm and moving at a feed rate of 0.25 mm/revolution--> **20 sec**

Q)The spade drills are used for drilling--> **Deep and large diameter holes**

Q)Tolerance in drilling is function of the--> **Feed and size of drill**

Q)For hard materials, the drill point angle is--> **Higher**

Q)In a drilling operation if the drill point is outside the drill axis the effect of hole will be--> **The hole became too large**

Q)Drill chucks are used for holding--> **Straight shank drills**

Q)Shank of a taper or drills are provided with standard taper and it is known--> **Morse taper**

Q)Which one of the following processes results in the best accuracy of the hole made--> **Reaming**

Q)Which of the following cutter should use in a drilling machine to recess the head of the bolt screw--> **counter bore**

Q)Feed of drill is--> **The distance the drill moves parallel to its axis into the work in each revolution of the spindle.**

Q)The cutting lip angle of the drill--> **118°**

Q)_____ is the operation of making a conical enlargement at the end of drilled hole--> **Counter sinking**

Q)An oversize hole is produced by a drill of--> **Lips of drill are of unequal length**

Q)The tool is used to hold the taper-shank drill--> **Sleeve**

Q)Upright drilling machine is intended for--> **Heavier work**

Q)In gang drilling machine the spindle are driven by--> **Individual motor**

Q)The drilling machine designed for drilling large and heavy work pieces is--> **Upright drilling machine**

Q)The machine which is used to drill a number of holes in a work piece simultaneously is called--> **Multiple Spindle drilling machine**

Q)The size of the shaper is determined by--> **The maximum length of stroke of the ram**

Q)The hydraulic shaper is widely used because--> **It permits the cutting tool to move uniformly during cutting stroke.**

Q)Stroke of the ram in the shaper is adjusted by--> **Changing the position of the crank pin**

Q)A reamer is used to correct the--> **Size and roundness of a drilled hole**

Q)A twist drill has its point thinned in order to--> **Reduce the axial (feed) pressure**

Q)Twist drills are usually considered suitable for machining hole having a length less than--> **Five times then diameter**

Q)The depth of cut in drilling is _____ the drill diameter--> **One – Half**

- Q)The table in a slotter is--> **Circular table**
- Q)Hexagonal slot can be cut in a cylinder by using--> **slotter**
- Q)In slotter the tool pressure acts--> **Along the tool length**
- Q)Crank shaper gives--> **Quick return motion to the tool during return stroke**
- Q)In hydraulic shaper infinite number of cutting speeds can be obtained from zero to maximum by control of--> **Throttle valve**
- Q)The cross rail of planer is used to--> **Carry the vertical tool post**
- Q)Quick returns mechanism on slotter is--> **Whit worth mechanism**
- Q)Job feeding in a shaper is obtained by--> **Table movement**
- Q)The relative motion of work piece in planning is--> **Translatory**
- Q)Quick return mechanism is not required in--> **broaching machine**
- Q)During machining on a planer--> **Cutting tool is stationary**
- Q)The average time ratio of cutting stroke to return stroke in a shaper is--> **3:2**
- Q)The planer differs from shaper mainly as--> **The table is moving while the tool remains stationary**
- Q)Feed in shaping is expressed in--> **mm/stroke**
- Q)Flat thin work is held on planer by--> **Toe dogs and stops**
- Q)For proper seating of the work in a shaper vise for machining, the work should be supported on--> **Parallels**
- Q)The cutting speed of the tool in a mechanical shaper is--> **Maximum at the middle of the cutting stroke**
- Q)Cylindrical parts as held on planer by--> **V Block, T- Bolts and clamps**
- Q)To shape splines in a shaft which must be accurately spaced, the work is mounted in--> **Between indexing centers**
- Q)Which of the following work holding device is preferred for shaping a keyway in a cylindrical shaft.--> **V Block**
- Q)Size of planer is size used by--> **Size of table and height of cross rail**