1. A compound table for a drilling machine is particularly useful when
(1) drilling reaming and tapping are to be performed in one setting
(2) a large number of holes are to be drilled in a single component
(3) a large number of components are to be drilled having one hole in them
(4) accurate location of job is required for angular drilling

Ans: 1

2. The purpose of the clearance angle is to :
(1) guide the chips away
(2)to avoid overheating
(3)to prevent the tool rubbing with the work
(4) to break the length of chips

Ans: 3

3. When the height from which a body is dropped is half its original value, the potential energy becomes _____ its original value

(1) 2 times (2)¼ (3) remains same (4) ½

Ans: 4 (PE = mgh; h → h/2 PE → ½ PE)

4. A block level can be used for checking:
(1) vertical and horizontal alignment (2) only vertical alignment
(3) only horizontal alignment (4) only angular alignment

Ans: 1

5. The sensitiveness of the spirit level depends upon the
(1) size of the bubble (2) length of the glass tube
(3) type of liquid filled in the glass tube (4) curvature of the glass tube

Ans: 4

6. The filling up of orbitals by electrons takes place according to :
(1) increasing order of energy levels
(2)decreasing order of energy levels
(3) increasing order of atomic radii
(4)decreasing order of atomic radii

Ans: 4

7. A source program is
(1) a program written in a machine language
(2) a program to be translated into machine language
(3) a machine language translation of a program written in a high level language
(4) none of the above

Ans: 3

8. In a lathe, the depth of cut is given by:
(1) the top slide
(2) the cross slide
(3) the compound slide
(4) adjusting the tool

Ans: 2

9. The principle of working of a dial test indicator is :
(1) The linear motion is converted into a reciprocating motion, using slotted link
(2) linear motion is converted into a rotary motion using rack and pinions
(3) magnification of small variation using lenses
(4) magnification by electronic means

Ans: 2

10. A special feature of the radial drilling machine is
(1) it can be used for drilling with H.S.S. drill
(2) table can be moved and set at any position
(3) a variety of speeds is available
(4) the spindle can be brought to any position

Ans: 4

11. A tap is broken. Which of the statements about the cause is correct?
(1) diameter of the drilled hole is small
(2) Pitch of the tap is large
(3) lubricant was not used
(4) Tap is not aligned with the hole

Ans: 4

12. The chisel will dig into the material when:
(1) rake angle is more
(2) clearance angle is too low
(3) angle of inclination is more
(4)angle of inclination is low

Ans: 3

13. For the broaching process the length of broach is not determined by
(1)amount of metal that must be removed
(2)length of machine stroke
(3)required accuracy and degree of finish
(4)All the above
Ans: 4

14. In case of a semiconductor, which of the following statement is wrong?
(1) doping increases conductivity
(2) resistivity is in between that of a conductor and insulater
(3) temperature coefficient of resistance is negative
(4) at absolute zero temperature, it behaves like a conductor

Ans: 4

15. The revolving head type of knurling tool is fitted with a
(1) course pitch (2) fine pitch
(3) medium pitch (4) course, medium and fine pitch

Ans: 4

16. A new hacksaw blade after a few strokes becomes loose because of the
(1) stretching of the blade
(2) wing-nut thread being worn out
(3) wrong pitch of the blade
(4)improper selection of the set of saws

Ans: 1

17. When the taper shank of the drill is larger than the machine spindle, the device to hold the drill is a
(1) drill sleeve (2) taper socket (3) drill drift (4) chuck and key

Ans: 2

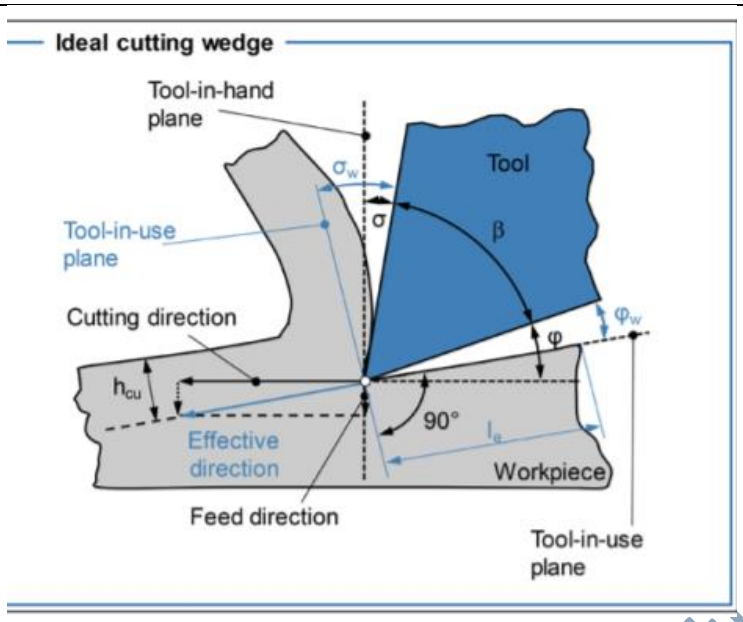
18. Drilling jigs are used for
(1) drilling operation only
(2) clamping the jobs while drilling
(3) drilling, reaming, tapping and other allied operations
(4) sharpening drill to correct angle

Ans: 3

19. Formation of a chip while cutting is based on the
(1) rake angle of the tool
(2)clearance angle of the tool
(3) wedge angle of the tool
(4)clearance and wedge angle of the tool

Ans: 1.

The ideal cutting wedge is represented in Figure 3, which is composed of tool clearance angle φ, wedge angle β and rake angle σ. The correlation between the clearance, tool and rake angles is described in Equation 1. φ+β+σ=90° (1) φ [°] Clearance angle σ [°] Rake Angle β [°] Wedge angle



The rake angle influences the CHIP forming, which occurs during the cutting process. The larger the rake angle, the smaller is the chip deformation during cutting. On the other hand, the increase of the rake angle reduces the tool stability. The smaller the rake angle, the larger is the chip deformation. In this case, the chip experiences a larger curvature than usual. It is for this reason that the rake angle influences the resulting cutting forces as well as the temperature along the cutting edge and the rake surface.

https://www.geartechnology.com/issues/0118x/tool-wear.pdf

20. Which among the following is not a capability of reamers?
(1) finishing small holes
(2)finishing any machined profiles
(3) accuracy to closer limits
(4)producing high quality surface finish

Ans: 2

21. The unit of magnetic moment is
(1) weber
(2) Ampere metresquare
(3) weber per metre
(4) Tesla

Ans: 2

22. Covalent bond is formed by
(1) gain of electrons
(2) loss of electrons
(3) sharing of pairs of electrons
(4) exchanging electrons

Ans: 3

23. The abrasive used for honing of non ferrous metals is
(1) Boron carbide (2) Diamond
(3) Silicon carbide (4) Aluminium oxide

Ans: 3

24. Applications of a preliminary load for a specified period of time on an indentation tool is used in the
(1) Vicker hardness test (2) Brinnel hardness test
(3) Shore test (4) Rockwell hardness test

Ans: 4.

25. The most common method employed for turning steep tapers is
(1) swiveling the compound slide
(2) form tool plunging
(3) offsetting the tailstock method
(4) the combinations of the lathe compound slide and the cross-slide

Ans: 1

26. Kumar walks 10km towards North. From there he walks 6 km towards South. Then he walks 3 km towards East. At this point, how far and in which direction is he with reference to his starting point?
(1) 5 km West (2) 7km West (3) 7km East (4) 5 km North-East

Ans: 4

27. The main advantage of orthogonal cutting is
(1) it gives good finish
(2)it increases the life of the tool
(3) it distributes load on a larger area
(4)it increases the load at the cutting edge

Ans: 2

28. The purpose of machining a square shoulder is
(1) to eliminate sharp corners and edges
(2) for the mating part to fit right against the shoulder
(3) to give additional strength at the shoulder
(4) to decrease the strength at the shoulder
Ans: 2

29. The method of hardness testing carried out on big machine components which cannot be carried toa testing machine is the
(1) Shore test (2) Brinnel hardness test
(3) Vickers hardness test (4) Rockwell hardness test

Ans: 1

30. Which of the following statements is correct about an independent four jaw chuck?
(1) it is not to be used for round jobs
(2) the jaws move simultaneously
(3) the jaws can be reversed and assembled
(4) the jaws cannot be used in reversed portion to hold work

Ans: 4

31. The type of rivets used for girders and heavy construction engineering works is
(1)counter sink head (2) snap head (3) flat head (4) pan head

Ans: 4

32. In globe valves the pressure is usually
(1) on the left side (2) against the stem
(3) on the right side (4) under the seat

Ans: 4

33. The purpose of normalizing is to
(1) soften the metal (2) increase the toughness
(3) refine the structure (4) harden the surface

Ans: 3

34. The type of jig in which a base plate is not available is the
(1) plate jig (2) box jig (3)trunnion jig (4) latch jig

Ans: 1

35. A sine bar is used for
(1) leveling the job for drilling (2) finding the angle of a taper job
(3) measuring the diameter of holes (4) checking the profile of a thread

Ans: 2

36. In a COBOL program, the numbers of divisions is
(1) one (2) two (3) three (4) four

Ans: 3

37. The error in squareness can be accurately determined by using a
(1) try square and slip gauges (2) try square and feeler gauge
(3) cylinder square and slip gauges (4) beveled edge try square

Ans: 4

38. In the pipe assembly, the hemp packing is used
(1) for easy engagement (2) to fil the gap between threads
(3) to avoid leakage (4) to get tight fitting

Ans: 3

39. A work piece is centre drilled in the lathe for the purpose of
(1) turning in between centres only
(2) spotting a hole for drilling or for turning in between centres
(3) placing it on a mandrel for turning in between centres
(4) facing to the centre of the work piece

Ans: 2

40. EPROM can be used for
(1) Erasing the contents of ROM
(2) Reconstructing the contents of ROM
(3) Erasing and reconstructing the contents of ROM
(4) Duplicating ROM

Ans: 3

41. The graduations of a depth micrometer are
(1) similar to an outside micrometer
(2) in the reverse direction to that of the outside micrometer both thimble and sleeve
(3) in the reverse direction only on the sleeve
(4) in the reverse direction only on the thimble
Ans: 2

42. The causes of slag inclusion are
(1) current too high (2) using of normal arc
(3) improper cleaning of base metal (4) incorrect electrode motion
Ans: 3

Slag rises to the top of the pool because of its low density. Upon reaching the weldment's surface, it solidifies to create a layer of protection between the molten metal and air, blocking further reactions between the two.

This way flux, which eventually becomes slag, shields the weld pool from the air and rids it of internal impurities.

Slag Inclusions are a common welding defect that occurs when slag, a welding by-product, gets stuck inside the weldment. This is an unfavorable condition that creates performance issues down the line.

In most cases, it is a result of bad welding technique or improper selection of components and parameters.

This defect primarily occurs in flux-based welding techniques like Stick Welding and Flux-Cored Arc Welding.

https://weldguru.com/slag-inclusion/

43. Clearances are given between bolts and holes in assemblies for
(1) trapping burrs, dust etc
(2)lubrication
(3) minimizing the load on bolt
(4)adjusting for slight misalignment

Ans: 4

44. The purpose of groves given on the lapping plate is for
(1) reducing friction
(2)retaining lapping paste
(3) collecting the metal chips
(4)preventing distortion of the plate

Ans: 2