## PAPER – I
## FITTER
## (THEORY)
## SEMESTER – III

TIME: 3 Hrs.                                                      MARKS : 150

Note:   Attempt all the question.
        All questions carry equal marks.
        This paper carries negative marking. 25% marks will be deducted for each wrong
        answer.

Choose the correct answer:

1.      The proper device to hold gear or pully on lathe is _____
        a) Steady                          b) Angle Plate

        c) Mandrel                         d) Four Jaw chuck

2.      The angle of dead centre is -
        a) 90 degree                       b) 68 degree

        c) 30 degree                       d) 45 degree

3.      The type of thread on lead screw of lathe _____
        a) Square                          b) Acme

        c) Whit worth                      d) Butters

4.      The centre drill is also known as -
        a) Cutting tool                    b) Facing tool

        c) Continuation drill bit          d) Tool head

5.      Lathe bed is made of -
        a) H.C. Steel                      b) Cast iron

        c) Mild steel                      d) Nickel

6.      The angle of angle plate used on lathe is -
        a) 30 degree                       b) 45 degree

        c) 60 degree                       d) 90 degree

7.      The face plate is made of -
        a) Carbon Steel                    b) Tool steel

        c) Wrought iron                    d) Cast iron

8. Which bolts is without head -
   a) Head less bolts                    b) Eye bolt
   c) Hook bolt                          d) Rag bolt

9. The fastener having threading on both sides is known as -
   a) Bolt                               b) Nut
   c) Screw                              d) Stud

10. Most of the screw threads used in electrical equipment based in the name of -
    a) B.S.P.                            b) B.S.F
    c) BA                                d) Acme

11. Radious gauges are used to check the size of _____
    a) Length                            b) Inside dia
    c) Outside dia                       d) None of these

12. Feeler gauge is used to check the _____
    a) Concave surface                   b) Convex surface
    c) Both (a) & (b)                    d) To check the gap in flat surfaces

13. Screw pitch gauge is used to check the pitch of the screw at about the ranges of -
    a) 0.35 mm to 0.5 mm                 b) 0.35 mm to 5 mm
    c) 3.5 mm to 5.0 mm                  d) 25 mm to 30 mm

14. The top surface joining the two sides of the thread is known as -
    a) Root                              b) Depth
    c) Flank                             d) None of these

15. The other name of screw pitch gauge is -
    a) Pitch gauge                       b) Depth gauge
    c) Thread gauge                      d) Slip gauge

16. The other name of the feeler gauge is known as -
    a) Gap gauge                         b) Clearance gauge
    c) Profile gauge                     d) Thickness gauge

17. The angle of B.A thread is -
    a) 45 degree                      b) 29 degree
    c) 471/2 degree              d) 60 degree

18. A fixed steady rest is fixed to the lath bed and only used to -
    a) Support at one fixed place only      b) Only support the chucks
    c) Support the both ends           d) Only support centres

19. The morse taper is denoted by the letter m.T. it is available from _____
    a) MT0 to MT4                 b) MT0 to MT5
    c) MT0 to MT6                 d) MT0 to MT7

20. For lapping non-ferrous metal, the suitable abrasive is -
    a) Diamond                    b) Aluminium oxide
    c) Silicone carbide            d) All of these

21. The bearing allowed to drive slightly inclined shaft is -
    a) Ball bearing                b) Rollar bearing
    c) Spiral bearing             d) None of these

22. The process of finishing of round holes by means of bonded abrasive stone is called
    a) Lapping                   b) Reaming
    c) Boring                    d) Honing

23. The process of imbedding the abrasive grains on a lap is called -
    a) Rubbing                   b) Charging
    c) Fixing                     d) Pasting

24. The plug gauge with Go and Not Go ends on the same side of the gauge is –
    a) Adjustable plug gauge         b) Progressive plug gauge
    c) Double ended plug gauge      d) Fixed types plug gauge

25. The main advantages of using hexagonal socket head cap screw is to -
    a) Operate frequently and easily      b) Dismantle parts easily
    c) Have a very firm grip           d) Avoid the project

26. Counter boring is done for ...........
    a) Deburring hole ends
    b) Enlarging Holes to accurate size
    c) Finishing cored holes
    d) Accommodating socket head screw

27. Most widely used materials for lathe cutting tool is -
    a) High carbon steel
    b) Plain carbon steel
    c) Mild steel
    d) Medium carbon steel

28. The suitable cutting fluid for machining mild steel is -
    a) Soluble oil + water
    b) Distilled water
    c) Neat cutting Oil
    d) Synthetic soluble oil

29. Which one of following is an artificial abrasive?
    a) Emery
    b) Diamond
    c) Corundum
    d) Silicon carbide

30. For irregularly shaped work piece on a lathe the work holding accessories is used ....
    a) Three Jaw chuck
    b) Two jaw chuck
    c) Driving plate
    d) Face plate

31. While normalizing the component should be cooled -
    a) By clipping in water
    b) By forced air
    c) By quenching in oil
    d) In still air to room temperature

32. The purpose of normalizing is to ........
    a) Soften the metal
    b) In crease the toughness
    c) Refine the structure
    d) Harden the surface

33. The process of heating and cooling for charging the structure of steel for obtaining the required properties is called -
    a) Hardening
    b) Tempering
    c) Annealing
    d) Heat treatment

34. It is possible to measure the angle of a component to an accuracy of one minute with ....
    a) Bevel protractor
    b) Vernier caliper
    c) Combination set
    d) Sine bar with slip gauge

35. Which gauge is suitable to check the dimensional limit of length of a shaft?
    a) Progressive gauge
    b) Plug gauge
    c) Ring Gauge
    d) Snap gauge

36.  Centre line of the contact rollers and datum surface of the sine bar are -
     a) Same line                          b) Perpendicular
     c) Inclined                           d) Parallel

37.  Which type of fit is used in the inner race with shaft while mounting a ball bearing?
     a) Precision side                     b) Large clearance
     c) Loose running                      d) Interference

38.  The process of heating the steel above critical temperature and cools it is open atmospheric air is known as ........
     a) Hardening                          b) Tempering
     c) Annealing                          d) Normalizing

39.  The other name of rolling contact bearing is .......
     a) Friction less bearing              b) Bush bearing
     c) Pedestal bearing                   d) Journal bearing

40.  On a center lathe, the threads of various feed and pitch can be obtained by .......
     a) Back gear                          b) Quick change gear box
     c) Apron system                       d) Tumbler gear system

41.  A screw capable of setting matching parts through their threaded holes and does not remain projected over this setting is called ...
     a) Round head screw                   b) Pan head screw
     c) Crease head screw                  d) Lower head screw

42.  The drilled hole is larger than the size of drill. The reason is......
     a) Too much feed                      b) Helix angle not accurate
     c) Lip clearance not accurate         d) Unequal length of the cutting edges

43.  The smaller unit of an angle is .......
     a) Radian                             b) Second
     c) Minute                             d) Degree

44. Choose the correct formula to find the dia of job (d) in mm, if the cutting speed (v) is m/min and revolution per minute (n) are given -
    a) $d = 1000 \times v / \pi \times n$
    b) $d = \pi \times n / 1000 \times v$
    c) $d = 1000 \times \pi / v \times n$
    d) $1000 \times n / \pi \times v$

45. Which one of the following tool angle control the chip formation while plain turning?
    a) Side clearance angle
    b) Front clearance angle
    c) Approach angle
    d) Top rack angle

46. Which angle makes rake angle in a twisted drill?
    a) Chisel angle
    b) Point angle
    c) Helix angle
    d) Lip clearance angle

47. Taper angle for tilting cross-slide method is calculated by -
    a) $Sin\Theta = D-d/2l$
    b) $Cos\Theta = D-d/2l$
    c) $Tan\Theta = D-d/2l$
    d) All of these

48. To set an angle using sine bar the height of the slip gauges and the length of the sine bar which forms the ratio of ………….
    a) $Cos \varnothing$
    b) $Sin \varnothing$
    c) $Tan \varnothing$
    d) $Cot \varnothing$

49. Measuring gauges require wear resistance, which heat treatment process ids required to get snew properties -
    a) Normalizing
    b) Case hardening
    c) Annealing
    d) Tempering

50. Which one of the following formula is applied to find the tail stock offset when turning tapers by offset method?
    a) $(D - d) / 2l$
    b) $(D - d) / l$
    c) $(D - d) \times L / 2l$
    d) $(d - D) / 2l$

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