

181/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. An oily floor should be cleaned by:
(A) Cotton waste (B) Putting water
(C) Putting saw dust or sand (D) Spraying carbon dioxide
2. The file used for trimming the rough edges of soft metal casting:
(A) Bastard file (B) Rough file
(C) Rasp file (D) Second cut file
3. The cutting angle for chipping mild steel is:
(A) 65° (B) 45°
(C) 55° (D) 60°
4. The box nut of bench vice is made of :
(A) Mild steel (B) Gun metal
(C) Phosphorous bronze (D) Alloy steel
5. The point angle of drill depends on:
(A) Drill materials (B) Work materials
(C) The size of drill (D) The R.P.M and feed of the work
6. The distance, which the cutting edge of a tool passes over the material in a minute while machining, is known as:
(A) RPM (B) Feed
(C) Machine speed (D) Cutting speed
7. The suitable cutting fluid for drilling mild steel in a centre lathe is:
(A) Distilled water (B) Synthetic soluble oil
(C) Soluble oil (D) Mineral oil
8. The process of enlarging the end of hole for accommodating the socket screw head:
(A) Counter boring (B) Counter sinking
(C) Spot facing (D) Step boring

9. Calculate the tapping hole size for a M10 × 1.5 precision screw thread:
- (A) 8.2 (B) 8.5
(C) 10 (D) 9.2
10. The purpose of rake angle is :
- (A) To prevent the flank of the tool rubbing with the work piece
(B) To increase the tool life
(C) To prevent tool from jamming
(D) To guide the chip away and avoid clogging
11. The main advantage of orthogonal cutting is:
- (A) It distributed load on larger area
(B) It is suitable for rough turning
(C) More depth of cut can given
(D) Suitable for finish turning
12. The most important quality of any cutting fluid is:
- (A) Emulsification (B) Viscosity
(C) Specific gravity (D) Adhesiveness
13. A M.S round 30 mm dia. and 100 mm length has to be turned 25 mm dia. in one cut for full length r.p.m and feed rate is 200 and 0.2 mm respectively, turning time is:
- (A) 2.5 minutes (B) 5 minutes
(C) 2 minutes (D) 5.5 minutes
14. Lathe bed are made out of:
- (A) White cast iron (B) Grey cast iron
(C) Alloy steel (D) General purpose steel
15. The centre drill size is selected on the basis of:
- (A) Length of work (B) Type of operation
(C) Diameter of work (D) Material of the work
16. Running the drill too fast, result in :
- (A) Rough hole (B) Spoiling the cutting edge
(C) Over sized hole (D) Poor surface finish

17. The included angle of vee groove in 'V' block is:
(A) 45° (B) 90°
(C) 120° (D) 60°
18. Which of the following is NOT the part of combination set?
(A) Centre head (B) Rule
(C) Swivell head (D) Protractor head
19. When the taper shank of the drill is larger than the tailstock spindle bore, the device to hold the drill is?
(A) Drill socket (B) Drill sleeve
(C) Drill drift (D) Drill chuck and key
20. For a hole ϕ 10 mm, the reaming allowance should be about:
(A) 0.2 mm (B) 2 mm
(C) 0.4 mm (D) 0.6 mm
21. The tail stock offset method of taper turning, amount of offset may be measured:
(A) Using micrometer, caliper with offset gauge
(B) Vernier depth gauge and steel rule
(C) Steel rule measure the distance between dead centre and tool
(D) Using cross slide graduated collar and feeler gauge
22. The property of metal by virtue of which it offers resistance of abrasion, indentation or wear is known as:
(A) Hardness (B) Toughness
(C) Malleability (D) Ductility
23. The least count of vernier bevel protractor is:
(A) 0.5' (B) 5'
(C) 5" (D) 0.5°
24. For grinding carbide materials:
(A) Aluminium oxide wheel is used (B) Carundum wheel is used
(C) Diamond wheel is used (D) Silicon carbide wheel is used
25. A grinding wheel is marked 51 A 46 K 5VBE. What does 5 denote:
(A) Kind of abrasive (B) Kind of bond
(C) Structure (D) Grain size

26. The teeth of hacksaw blade are set to:
- (A) Provide clearance for blade
 - (B) Prevent jamming and breakage of blade
 - (C) The cut is to be broader than the thickness of the saw blade
 - (D) All of above
27. The pitch of 3-start thread is lead divided by:
- (A) 1
 - (B) 3
 - (C) 9
 - (D) 6
28. Which of following reamer particularly suitable for reaming holes having key way groove:
- (A) Pilot reamer
 - (B) Taper reamer
 - (C) Helical reamer
 - (D) Straight fluted reamer
29. The effect of using glazed or loaded wheel is:
- (A) Poor surface finish
 - (B) More heat generated
 - (C) Excessive cutting pressure between the wheel face and work surface
 - (D) All of above
30. Screw threads are produced without metal removing by a process called:
- (A) Thread chasing
 - (B) Thread rolling
 - (C) Tapping
 - (D) Thread grinding
31. Butress threads are most commonly used for :
- (A) Resisting force exerted in one direction
 - (B) Special bolt and nut in structural work
 - (C) Transmission of motion
 - (D) By lift heavy load
32. In hole basis system:
- (A) The size of the shaft is made constant
 - (B) The size of the hole is made constant
 - (C) The permissible tolerance are given on the hole and shaft
 - (D) Only allowance is given on hole

33. The pattern of the work surface caused by movement of cutting tool is known as :
- (A) Waviness (B) Roughness
(C) Roughness spacing (D) Surface texture
34. Which one of following indicates the Ra value:
- (A) 0.001 mm (B) 0.00001 mm
(C) 0.0001 mm (D) 0.01 mm
35. Lathe mandrels can be termed as:
- (A) Jig (B) Gauge
(C) Fixture (D) Template
36. Jig is device which:
- (A) Locate the work piece (B) Guide the cutting tool
(C) Hold and supports the work piece (D) All of above
37. Cast iron is used for manufacturing machine beds because:
- (A) It is harder and brittle metals (B) It can resist more compressive stress
(C) It is heavy in weight (D) It is cheaper metal
38. Galvanized iron is coated with:
- (A) Zinc (B) Copper
(C) Tin (D) Lead
39. Bronze is an alloy of:
- (A) Copper and tin (B) Copper and zinc
(C) Copper and lead (D) Lead and tin
40. Which one of the following is physical property of metal?
- (A) Corrosiveness (B) Malleability
(C) Ductility (D) Fusibility
41. Liquid carburising is done in heated salt bath which one of following NOT a carburising salt:
- (A) Sodium carbonate (B) Sodium sulphate
(C) Barium chloride (D) Sodium cyanide

42. Lead is a metal used for balancing weight during lathe face plate works the reason for this is that lead is:
- (A) Most toughest (B) Heaviest
(C) Most elastic (D) Most ductile
43. Which one of following metal has less carbon content:
- (A) Wrought iron (B) Cast iron
(C) Mild steel (D) Pig iron
44. Annealing is a process of heating the steel above upper critical temperature and cool it:
- (A) Atmospheric air (B) Quenching in oil
(C) Covered with dry ash or dry lime (D) Quenching in casustic soda
45. Centre line of the contact rollers and datum surface of the sine bar are:
- (A) Parallel (B) Perpendicular
(C) Inclined (D) Same line
46. In a vernier micrometer, vernier scale is graduated on:
- (A) Thimble (B) Frame
(C) Spindle (D) Barrel
47. Which instrument is used for checking the inside size of slots or holes:
- (A) Comparator gauge (B) Snap gauge
(C) Ring gauge (D) Telescopic gauge
48. In which one of the following standard tapers, it is easy to determine the taper dimensions when the specification is given in number:
- (A) Jarno taper (B) Morse taper
(C) Metric taper (D) Brown and sharpe taper
49. In a multi start thread, the axial advancement of bolt in to the nut for each revolution of the bolt:
- (A) Root (B) Lead
(C) Crest (D) Pitch

50. A work piece is to be manufactured with a minimum dimension of 60 mm and tolerance of 0.02 mm Which is designation correctly for the above tolerance dimension?
- (A) $60^{+0.02}_{0.00}$ (B) $60^{+0.02}_{+0.01}$
 (C) $60^{+0.03}_{-0.01}$ (D) 60 ± 0.02
51. A capstan lathe meant for bar work has a bar feed mechanism and a hollow main spindle. The hollow main spindle has a provision to mount:
- (A) For Jaw chuck (B) Self centering chuck
 (C) Collect chuck (D) Combination chuck
52. Which taper is used on spindle nose of the lathe head stock?
- (A) Brown and sharpe taper (B) Morse taper
 (C) Jarno taper (D) Pin taper
53. C.N.C lathe machines have built in co-ordinates measuring system, the zero position of this co-ordination system is called:
- (A) Work zero point (B) Machine zero point
 (C) Reference point (D) Program zero point
54. Which one of following factors will NOT influence the selection of cutting speed?
- (A) Work material (B) Operation to be performed
 (C) Tool material (D) Diameter of work piece
55. Taper turning by using compound slide method can cause the following defect?
- (A) Chatter (B) Steep taper can't produced
 (C) Internal taper can't produced (D) Poor surface finish
56. Tool makers buttons are used for:
- (A) Setting the tool correct centre height
 (B) Aligning the work piece for boring to given datum
 (C) Adjusting the slackness in guid ways of cross-slide
 (D) Holding the work piece and Guiding the tool
57. When using taper turning attachment, the depth of cut given by?
- (A) Compound slide (B) Cross - slide
 (C) Tail stock (D) Adjusting tool

58. A follower steady consists of:
- (A) One pad (B) Four pad
(C) Three pad (D) Two pad
59. While using the form tool method of taper turning:
- (A) Carriage to be locked (B) Cross slide to be locked
(C) Top slide to be locked (D) Tail stock to be locked
60. Which among the following centre is suitable when work piece held between centres to be turned at high speed?
- (A) Tipped centre (B) Ball centre
(C) Revolving centre (D) Insert-type centre:
61. The hand of the thread that is being cut is determined by the rotation of the:
- (A) Main motor (B) Main spindle
(C) Feed shaft (D) Lead screw
62. The taper ratio of standard metric self holding taper is:
- (A) 1:20 (B) 1:25
(C) 1:30 (D) 1:50
63. Which one of the following ferrous metal can't be melted into a liquid state?
- (A) Steel (B) Wrought Iron
(C) Cast iron (D) Pig Iron
64. The filler metal used during brazing is an alloy of:
- (A) Copper and zinc (B) Copper and tin
(C) Lead and copper (D) Zinc and lead
65. Which one of the following mechanical properties is most essential for the metals to undergo forging operation?
- (A) Elasticity (B) Tanacity
(C) Plasticity (D) Fusibility
66. Which among the following will have least coefficient of expansion?
- (A) Tungsten (B) Cromium
(C) Vanadium (D) Nickel