

162/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Steel rules are made up of :
(A) Spring steel (B) Mild steel
(C) Cast iron (D) High carbon steel
2. These calipers are also known as Hermaphrodite calipers.
(A) Jenny caliper (B) Firm joint calipers
(C) Spring calipers (D) None of the above
3. The angle of prick punch is :
(A) 60 degree (B) 45 degree
(C) 30 degree (D) 53 degree
4. The saw used for manual sawing is known as :
(A) Band saw (B) Hack saw
(C) Circular saw (D) Jig saw
5. The method of setting saw teeth in which one tooth remains straight, the next bent to the right, the next bent to the left is known as :
(A) Wavy set (B) Regular alternate set
(C) Racker set (D) Straight set
6. The function of the gullets provided on saw blade is :
(A) To act as a bearing surface (B) To remove the chips from the cut
(C) For providing cutting clearance (D) For perfect cooling action
7. The size of bench vice is specified by :
(A) Weight of vice (B) Length of spindle
(C) Width of jaws (D) Length of handle
8. The narrow and thin part of a file which fits into the handle is :
(A) Shoulder (B) Heel
(C) Tip (D) Tang

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[P.T.O.]

9. In single cut file the teeth are at an angle of _____ degree to the centre line.
- (A) 40 (B) 70
(C) 57 (D) 60
10. These files are available only in half round shapes.
- (A) Rasp cut file (B) Single cut file
(C) Double cut file (D) Curved cut file
11. _____ is the cutting edge of a drill bit which penetrate into metal while drilling.
- (A) LIP (B) Shank
(C) Tang (D) None of the above
12. Drift is used for :
- (A) Checking squareness and flatness (B) To remove the drill from the sleeve
(C) To fit the drill into the chuck (D) For holding the work while reaming
13. _____ drill is used for producing holes in softer materials like wood and plastics.
- (A) Straight fluted drill (B) Twist drill
(C) Core drill (D) Flat drill
14. _____ Tap is used to size the thread.
- (A) First tap (B) Finishing tap
(C) Second tap (D) Bottoming tap
15. The hammer's head is made up of :
- (A) Cast iron (B) Zinc passivated mild steel
(C) Plain carbon steel (D) Drop forged carbon steel
16. The point angle of a general purpose standard drill is :
- (A) 118 degree (B) 119 degree
(C) 90 degree (D) 145 degree
17. Vernier calipers is used to measure an accuracy of :
- (A) 0.02 mm (B) 0.3 mm
(C) 0.05 mm (D) 1.0 mm

18. For all ranges of micrometers the graduations marked on the barrel is :
- (A) (0-25) mm (B) (0-50) mm
(C) (0-100) mm (D) (0-20) mm
19. _____ Iron is almost pure iron.
- (A) Cast iron (B) Pig iron
(C) Malleable iron (D) Wrought iron
20. Metals which have little or no iron are called :
- (A) Non - corrossive metals (B) Non metals
(C) Alloys (D) Non - ferrous metals
21. Toughness is the property of a metal :
- (A) Ability to withstand shock
(B) Ability to resist the effect of compression
(C) Ability to withstand scratching
(D) By virtue of which it melts when heated
22. When metal can be drawn out in tension without rupture it is said to be :
- (A) Brittle (B) Fusible
(C) Strong (D) Ductile
23. The relationship existing between the mating surfaces of the parts because of difference in dimension is called :
- (A) Limit (B) Fit
(C) Tolerance (D) Clearance
24. Negative clearance is called :
- (A) Inter changeability (B) Interference
(C) Fundamental deviation (D) Allowance
25. For drilling abrasive materials _____ drills are used.
- (A) High speed drills (B) Tungsten carbide drills
(C) Carbon steel drills (D) None of the above

26. Most commonly used drills in metric series ranges from :
- (A) (1 mm – 12 mm) (B) (3 mm – 20 mm)
(C) (0.35 mm – 25 mm) (D) (1 mm – 24 mm)
27. The operation of producing large hole by specially designed tool is known as :
- (A) Spot facing (B) Counter boring
(C) Trepanning (D) Reaming
28. Peripheral speed of a drill surface which is in contact with the work is :
- (A) Feed (B) Velocity
(C) Cutting speed (D) Relative motion
29. Bessemer process is used for producing :
- (A) Cast iron (B) Aluminium
(C) Steel (D) Pig iron
30. Basically steel is an alloy of :
- (A) Nickel and Chromium (B) Iron and Carbon
(C) Iron and Cobalt (D) Cast iron and Nickel
31. High carbon steel containing more than 0.9% carbon are known as :
- (A) Mild steel (B) Tool steel
(C) Dead mild steel (D) Structural steel
32. In a lathe if the tool moves perpendicular to the axis of rotation of the work to produce a flat surface it is known as :
- (A) Taper turning (B) Plain turning
(C) Boring (D) Facing
33. The best material for a lathe bed is :
- (A) Tool steel (B) Wrought iron
(C) Plain carbon steel (D) Alloy cast iron
34. The part of a lathe which converts the rotary motion of the lead screw into linear motion of the carriage is :
- (A) Head stock (B) Feed rod
(C) Chuck (D) Apron

35. The accessory used in a lathe to prevent the deflection of work piece under the action of cutting tool is :
- (A) Rest (B) Collet chuck
(C) Tail stock (D) Bar feeding mechanism
36. The function of a mandrel in a lathe is :
- (A) For holding irregular work (B) Taper turning
(C) Holding hollow work (D) For holding special tool
37. The process of indentation of various forms on a cylindrical work surface is :
- (A) Shoulder turning (B) Parting off
(C) Knurling (D) Milling
38. The tail stock set over to turn a taper of 10 mm per 250 mm for a work piece having 250 mm length is :
- (A) 3 mm (B) 5 mm
(C) 10 mm (D) 2.5 mm
39. The gear ratio for cutting threads of 2.5 mm pitch on a lathe with a lead screw of 6 mm pitch is :
- (A) 60/20 (B) 25/60
(C) 2.5/60 (D) 60/2.5
40. Crank and slotted link mechanism is provided with :
- (A) Milling machine (B) Lathe
(C) Shaper (D) Planer
41. The process of dividing the periphery of work piece into any number of equal divisions by using dividing head is known as :
- (A) Straddle milling (B) Slab milling
(C) Indexing (D) Profile milling
42. The chip space between the back of one tooth and the face of the next tooth of a milling cutter is :
- (A) Land (B) Face
(C) Fillet (D) Gash

43. The term _____ applied to a grinding wheel refers to the tenacity or hardness with which the bond holds the abrasive grains in place.
- (A) Grit (B) Grade
(C) Structure (D) Mush number
44. For flat position welding the recommended flux coating is :
- (A) Cellulose (B) Rutile
(C) Iron oxide (D) Basic coatings
45. For tool grinding the recommended grit number for the grinding wheel is :
- (A) (12 – 30) (B) (30 – 80)
(C) (14 – 80) (D) (20 – 56)
46. The technique of machining utilizing the thermo-electric source of energy is adopted in :
- (A) EDM (B) USM
(C) CHM (D) TIG
47. In a gear tooth the radial distance from the pitch circle to the outside diameter is known as :
- (A) Addendum (B) Addendum circle
(C) Tooth thickness (D) Clearance
48. Fixture is a :
- (A) Work holding device (B) Tool holding device
(C) Locating device (D) Work holding and tool guiding device
49. 3-2-1 principle is applied for :
- (A) Positioning the fixture (B) Locating the component
(C) Clamping the component (D) Selection of grinding wheels
50. Box jig containing bushing on two or more sides is called :
- (A) Latch jig (B) Channel jig
(C) Indexing jig (D) Tumble jig

51. The die in which the cutting operation is combined with forming operation is :
- (A) Progressive die (B) Compound die
(C) Blanking die (D) Combination die
52. The operation in which the punch is made to size and the clearance is provided on the die is :
- (A) Blanking (B) Piercing
(C) Lancing (D) Embossing
53. The cutting operation in which hole is partly cut and bending down the cut portion is :
- (A) Cutting off (B) Parting
(C) Lancing (D) Notching
54. The chemical process of remelting, in the formation of a new compound whose molecular weight is a multiple of that of the original substance is known as :
- (A) Nuclear fission (B) Nuclear fusion
(C) Polymerisation (D) Carburising
55. Choose the thermosetting plastic from the following :
- (A) Polystyrene (B) Synthetic rubber
(C) Urea formaldehyde (D) Vinyl acrylic
56. The basic method of moulding thermo plastics is :
- (A) Compression moulding (B) Injection moulding
(C) Transfer moulding (D) Sand moulding
57. The female portion of the mould which gives the moulding its external shape is :
- (A) Core (B) Cavity
(C) Runner (D) Sprue
58. The part of the mould through which the molten material is injected into the impression is :
- (A) Register ring (B) Sprue bush
(C) Core (D) Core plate
59. When a core is machined from a block of steel or cast in one piece, it is termed as :
- (A) Insert core (B) Integer core
(C) Bolster core (D) Direct core

60. For the ejection of thin-walled box-type mouldings ————— ejector pins are used :
- (A) Stepped ejector pin (B) D-shaped ejector pin
(C) Z-shaped ejector pin (D) None of the above
61. For ejection of circular bosses on a moulding the ideal ejection method is :
- (A) Pin ejection (B) Sleeve ejection
(C) Bar ejection (D) Air ejection
62. The principle of withdrawing the sprue puller through a plate, in order to eject the feed system is incorporated in :
- (A) Z-type (B) M-type
(C) Mushroom headed (D) Reverse taper cold slug well type
63. The type of gate used for large thin-walled components to assist in the production of warpage free products :
- (A) Ring gate (B) Pin gate
(C) Film gate (D) Diaphragm gate
64. The moulding method used to produce hollow objects like bottles in thermo plastics is :
- (A) Slush moulding (B) Transfer moulding
(C) Flow moulding (D) Investment casting
65. The system in which any number can be expressed based upon powers of 2 is :
- (A) Denary system (B) Secondary
(C) Binary (D) Decimal
66. "The intensity of pressure at any point in a fluid at rest is the same in all directions". This statement is known as :
- (A) Newton's law (B) Charle's law
(C) Bernoulli's law (D) Pascal's law
67. Poppet valve is a :
- (A) Direction control valve (B) Flow control valve
(C) A valve used in toys (D) Pressure control valve
68. ————— valves are basically electromagnets.
- (A) Globe valves (B) Rotary valves
(C) Sluice valves (D) Solenoid valves

69. The study of the behavior and application of compressed air is known as :
- (A) Dynamics (B) Aero dynamics
(C) Hydraulics (D) Pneumatics
70. The system in which the command signal is constantly compared with the feed back position Signal is :
- (A) Open loop system (B) Indirect control system
(C) Transmission system (D) Closed loop system
71. In programming the code m 06 represents:
- (A) Start spindle rotation
(B) To indicate end of tape
(C) Rewind stop cod
(D) Command to execute the change of tool
72. The science which deals with the behavior of liquids at rest is :
- (A) Hydro kinetics (B) Hydrodynamics
(C) Hydro kinematics (D) Hydrostatics
73. Choose the spark erosion technique from the following :
- (A) EDM (B) AJM
(C) CHM (D) USM
74. Choose the duplicating device from the following :
- (A) Pantograph (B) Jig saw
(C) Hydraulic intensifier (D) Indexing head
75. In a power press the connecting rod to transmit motion from the main drive to slide is known as :
- (A) Pitman (B) Stripper
(C) Punch (D) Guide post
76. _____ is used in progressive die to bring the stock strip into the correct position for the succeeding operation.
- (A) Pilot (B) Knockout
(C) Crank (D) Guidepost