

113/2022

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. What is the other name of Universal combination shear?
(A) Scotch shear (B) Block shear
(C) Gilbow shear (D) Rohdes shear
2. Which material is used to make Hacksaw blade?
(A) Mild steel (B) High speed steel
(C) Stainless steel (D) Cast steel
3. Which chisel is used to cut oil grooves?
(A) Cross cut chisel (B) Half round nose chisel
(C) Diamond point chisel (D) Web chisel
4. How the nominal length of a hand file is specified?
(A) Point to Shoulder (B) Point to Tang
(C) Point to Ferrule (D) Point to Heel
5. What is the point angle of a general purpose drill?
(A) 87 degree (B) 122 degree
(C) 188 degree (D) 118 degree
6. Which of the following is used to finish the internal thread?
(A) First Tap (B) Taper Tap
(C) Intermediate Tap (D) Bottoming Tap
7. Which type of mallet is look like an 'egg', by its shape?
(A) Ordinary mallet (B) Tinsmith mallet
(C) Bossing mallet (D) Endfacket mallet
8. Which sheet metal hammer is used for setting the wired edge in a sheet metal work?
(A) Hollowing hammer (B) Planishing hammer
(C) Creasing hammer (D) Bullet hammer

9. What is the beveled angle of half moon stake?
 (A) 30 degree (B) 45 degree
 (C) 60 degree (D) 90 degree
10. What is the other name of 'C spanner?
 (A) Tubular box spanner (B) Socket spanner
 (C) Hook spanner (D) Adjustable spanner
11. Which screw driver is used where a straight screw driver will not reach?
 (A) Philips screw driver (B) Small sturdy screw driver
 (C) London pattern screw driver (D) Offset screw driver
12. Which holding device is used to hold small diameter jobs?
 (A) Pipe vice (B) Hand vice
 (C) Tool makers vice (D) Pin vice
13. What is the other name of hammer lock seam?
 (A) Pitts burgh seam (B) Locked grooved seam
 (C) Dovetail seam (D) Sunk lap
14. Which locked grooved seam is formed by using grooved mandrel?
 (A) External locked grooved seam (B) Internal locked grooved seam
 (C) Flange locked grooved seam (D) None of these
15. What is the purposes of edge stiffening?
 (A) Rigidity (B) Extra strength
 (C) Decorative appearance (D) None of these
16. What is the other name of stake joint?
 (A) Lap seam (B) Toy joint
 (C) Butt seam (D) Slip joint
17. Which formula is used to determine the wiring allowances?
 (A) $3.5 \times d + t$ (B) $2.5 \times d + t$
 (C) $1.5 \times d + t$ (D) $\pi d + t$

18. Which joint is a single lock is slipped into the double lock?
 (A) Lap seam (B) Dove tail seam
 (C) Butt seam (D) Slip joint
19. How can we calculate the hemming allowance?
 (A) 6 to 8 times of thickness (B) 10 to 12 times of thickness
 (C) 8 to 10 times of thickness (D) 3 to 4 times the thickness
20. Which dovetail seam is used for joining collar to flange without solder or rivets?
 (A) Plain dove tail seam (B) Beaded dove tail seam
 (C) Flange dovetail seam (D) None of these
21. Named the operation of punching circular holes in a regular pattern or evenly spaced?
 (A) Piercing (B) Perforating
 (C) Blanking (D) Shearing
22. Which development method is used make an oval to circle transformer piece?
 (A) Parallel line method (B) Radial line method
 (C) Triangulation method (D) Geometrical method
23. Which is the operation of forming impressions of figures, letters or designs on sheet metal?
 (A) Cupping (B) Drawing
 (C) Coining (D) Embossing
24. Which is the operation of cutting a sheet metal through part of its length and then bending the cut portion?
 (A) Lancing (B) Slitting
 (C) Notching (D) Forming
25. Which is the operation of producing cup shaped articles from flat sheet metal blanks?
 (A) Drawing (B) Coining
 (C) Slitting (D) Plugging
26. Which development method is used to develop articles or components which belong to the class of prisms which have a constant cross section throughout their length?
 (A) Parallel line method (B) Radial line method
 (C) Triangulation method (D) Geometrical method

27. Which spinning lathe tool is used for first step in spinning for hard metals such as brass and steel?
- (A) Hook tool (B) Bending tool
(C) Ball tool (D) Trimming tool
28. In spinning which tool is used to give shape for inside formation?
- (A) Ball tool (B) Hook tool
(C) Round nose tool (D) Bending tool
29. What is the sheet metal operation if reducing the diameter of the pipe for joining to same diameter of other pipe?
- (A) Crimping (B) Beading
(C) Grooving (D) Corrugating
30. Which of the following operation is used to remove the metal to the required shape from the edge of the sheet, to facilitate subsequent forming operation?
- (A) Shearing (B) Punching
(C) Plunging (D) Notching
31. In spinning which die is used to form the neck of a vessel after initial drawing?
- (A) Drawing die (B) Segmental die
(C) Core die (D) Inside drawing die
32. Which of the following is a power press operation of making a cut out of any shape on a component?
- (A) Piercing (B) Perforating
(C) Blanking (D) Shearing
33. Which development method is applied for developing the pattern of articles or components which are tapered to an apex?
- (A) Parallel line method (B) Radial line method
(C) Triangulation method (D) Geometrical method
34. Which of the following operation of cutting sheet metal in a straight line along the length?
- (A) Perforating (B) Blanking
(C) Slitting (D) Lancing

35. Which of the following is a power press operation of producing a flat component from a strip of sheet metal?
- (A) Punching (B) Perforating
(C) Blanking (D) Bending
36. Which of the following sheet metal machine is used for folding sheet in to different angles?
- (A) Bar folder (B) Swaging machine
(C) Beading machine (D) Spinning lathe
37. Which of the following statement is correct?
- (A) The cut out made made by piercing can be of any shape
(B) In punching only circular holes are made
(C) Both (A) and (B) are correct
(D) Both (A) and (B) are wrong
38. Which of the following is an operation of cutting sheet metal with the help of a punch and die on a power press?
- (A) Piercing (B) Perforating
(C) Blanking (D) Shearing
39. Which of the following operation is used where spherical or semi spherical articles are to be made?
- (A) Raising (B) Jogging
(C) Corrugating (D) Flanging
40. Which of the following operation of straightening the curved or bent sheet metal parts, on a press?
- (A) Perforating (B) Blanking
(C) Drawing (D) Planishing
41. The distance of a drill advances into the work in one complete rotation is called?
- (A) Speed (B) RPM
(C) Feed (D) Surface speed
42. What is the other name Circular shears?
- (A) Guillotine Shears (B) Squaring Shears
(C) Nibbling Shears (D) Rotary Shears

43. Which machine is used for making double hemming?
(A) Roll forming machine (B) Bar folder machine
(C) Guillotine shear (D) None of these
44. Which machine is used to form sheet metal or wires to various curvatures and diameters?
(A) Universal swaging machine (B) Roll forming machine
(C) Bar folder (D) Nibbling machine
45. Name the process of making the surface of a metal clean and free from scratches?
(A) Polishing (B) Oiling
(C) Nibbling (D) Notching
46. While bending sheet, if the bending force is removed, because of the elasticity of the material the required deformation is not achieved. What is called this phenomenon?
(A) Ductile force (B) Compressive force
(C) Tenacity (D) Spring back
47. If a piece of steel is heated, what will happen to it?
(A) Its tensile strength is reduced
(B) It become softer
(C) Its plasticity and malleability are increased
(D) All of the above
48. Which machine is good for producing a high shine or luster?
(A) Spray painting (B) Buffing machine
(C) Fly press (D) Nibbling machine
49. What is the ideal temperature of spray painting?
(A) 0° C (B) 24° C
(C) 55° C (D) 40° C
50. The jig which is used while drilling small piece parts, the body of this type of jig is machined from a solid block of steel :
(A) Solid jig (B) Channel jig
(C) Trunnion Jig (D) Leaf jig

51. How the fly press are specified?
 (A) Arm length (B) Size of press bed
 (C) Ball weight (D) Size of screw rod
52. What is the equation for find out the cutting speed in drilling?
 (A) $V = \pi dn/1000 \text{ m/min}$ (B) $V = 2\pi dn/1000 \text{ m/min}$
 (C) $V = dn/1000 \text{ m/min}$ (D) $V = \pi n/1000 \text{ m/min}$
53. Which physical property of metal have conductivity of heat and electricity?
 (A) Tenacity (B) Elasticity
 (C) Machinability (D) Conductivity
54. What is the colour of copper metal?
 (A) Reddish brown (B) Yellow
 (C) Brown (D) Bluish Grey
55. Carbon percentage in cast iron is :
 (A) 0.1 to 0.3 (B) 0.3 to 0.6
 (C) 0.6 to 1.7 (D) 2 to 4
56. Which material is used to produce high speed steel along with chromium, vanadium and molybdenum?
 (A) Nickel (B) Tungsten
 (C) Chromium (D) Manganese
57. Gun metal contains :
 (A) 70% Copper and 30% Zinc (B) 60% Copper 37% Zinc and 3% Iron
 (C) 88% Copper 10% Tin and 2% Zinc (D) 82% Copper and 18% Tin
58. Specific gravity of Lead is :
 (A) 11.36 (B) 8.92
 (C) 7.31 (D) 7.14
59. How Indian Standard Steel Sheets are designated?
 (A) ISSH (B) ISF
 (C) ISST (D) ISPL

60. What should be the weight of 50ISF10 of 1 meter?
(A) 3.14 kg (B) 3 kg
(C) 3.93 kg (D) 3.77 kg
61. What is ISPL?
(A) Indian Standard Steel Plate (B) Indian Standard Steel Flat
(C) Indian Standard Steel Sheet (D) Indian Standard Strips
62. How many types of steel angles are used in engineering work?
(A) 5 (B) 4
(C) 3 (D) 2
63. ISSH $3200 \times 600 \times 1.00$ where 3200 is :
(A) Length of the sheet (B) Width of sheet
(C) Thickness of sheet (D) Area of sheet
64. What is CRCA?
(A) Cold Rolled Cast Alloy (B) Cold Rolled Carbon Alloy
(C) Cold Rolled Condition Alloy (D) Cold Rolled Close Annealed
65. The reading accuracy of steel rule is :
(A) 0.1 mm (B) 0.01 mm
(C) 0.5 mm (D) 0.05 mm
66. Size of try square is specified by :
(A) Length of the blade (B) Width of the blade
(C) Length of stock (D) Width of the stock
67. The angle between the tongue and the body of 'L' square is :
(A) 30° (B) 45°
(C) 60° (D) 90°
68. Which of the following is an indirect measuring tool?
(A) Vernier calipers (B) Inside calipers
(C) Bevel protractor (D) Outside micrometer

69. Scribes are made of :
- (A) Cast iron (B) Brass
(C) High carbon steel (D) Mild steel
70. Which one of the following is the use of dividers?
- (A) Scribing straight line (B) Stepping distance
(C) Measuring inside dimensions (D) Marking light punch mark
71. Which compass is used to draw circles and arcs too large dimensions?
- (A) Firm joint type compass (B) Wing compass
(C) Spring joint type compass (D) Beam compass
72. Which punch is used for marking light punch mark needed to position dividers and trammels?
- (A) Prick punch (B) Dot punch
(C) Centre punch (D) Solid punch
73. The least count of metric outside micrometer :
- (A) 0.1 mm (B) 0.01 mm
(C) 0.2 mm (D) 0.02 mm
74. In vernier calipers main scale reading 60 mm vernier division coinciding with the main scale is 28th division, then the reading will be :
- (A) 0.56 mm (B) 60.56 mm
(C) 60.28 mm (D) 60.02 mm
75. The thickness of sheet is measured with :
- (A) Steel rule (B) Steel tape
(C) Outside calipers (D) Standard wire gauge
76. Which gauge is used to determine pitch of thread?
- (A) Radius gauge (B) Feeler gauge
(C) Screw pitch gauge (D) Vernier height gauge
77. How many types of riveted joints are made in construction and fabrication work?
- (A) 2 (B) 3
(C) 4 (D) 5

78. What temperature eutectic alloy solder melts?
(A) 183°C (B) 192°C
(C) 205°C (D) 220°C
79. Which is a hard soldering process used to join copper, brass and most ferrous metals?
(A) Welding (B) Brazing
(C) Seaming (D) Hemming
80. What is the temperature range of oxy-acetylene flame?
(A) 2700 to 2800°C (B) 1800 to 2200°C
(C) 2400 to 2700°C (D) 3100 to 3300°C
81. What type of equipment used for lighting the torch of blow pipe?
(A) Match box (B) Spark lighter
(C) Gas lighter (D) Electric lighter
82. Which metal welding process the carburizing flame is used?
(A) Mild steel (B) Brass
(C) Cast iron (D) Stellite
83. The two commonly used inert gas in TIG welding :
(A) Argon and Helium (B) Argon and Carbon dioxide
(C) Helium and Carbon dioxide (D) Nitrogen and Carbon dioxide
84. Spot welding, seam welding, butt welding, flash butt welding, projection welding are different methods of :
(A) Thermit welding (B) Forge welding
(C) Friction welding (D) Resistance welding
85. What is the process of separating metal on heating by chemical reaction of oxygen and heated metal?
(A) Gas cutting (B) Plasma cutting
(C) Laser cutting (D) Water jet cutting
86. Which is the material that cannot be cut with water jet cutting?
(A) Plastic (B) Diamond
(C) Rubber (D) Leather

87. Which electrode material is used for plasma cutting?
- (A) 2% Thoriated tungsten (B) 3% Thoriated tungsten
(C) 4% Thoriated tungsten (D) 5% Thoriated tungsten
88. Which cutting method produces the least Kerf?
- (A) Water jet cutting (B) Plasma cutting
(C) Laser cutting (D) Gas cutting
89. The process of chemical cleaning of metal with dilute sulphuric acid or mixed acids :
- (A) Degreasing (B) Blast cleaning
(C) Pickling (D) Flame descaling
90. What is the name of process where the layer of metal deposited by electrically on another metal?
- (A) Galvanizing (B) Metallising
(C) Anodising (D) Electroplating
91. The advantages of aluminium fabrication using various sections is, because it is:
- (A) Light weight, resist corrosion
(B) Medium weight cannot be bent
(C) More weight cannot be load
(D) Heavy weight cannot be extruded
92. Which aluminium sections are used as central member of door frame?
- (A) Door vertical (B) Door top and bottom
(C) Door handle (D) Door mullions
93. Which screw thread of 55° included angle and depth of thread is $0.6403 \times P$ is used in general fasteners?
- (A) BSW thread (B) BIS thread
(C) BA thread (D) BSP thread

94. What is referred in screw thread specification M 24 × 2?
 (A) Minor diameter and pitch (B) Major diameter and pitch
 (C) Minor diameter and depth (D) Major diameter and depth
95. Which seam is used for join roof panel section?
 (A) Locked grooved seam (B) Paned down seam
 (C) Knocked up seam (D) Standing seam
96. Which seam is used for duct work?
 (A) Pitt's burgh lock seam (B) Knocked up seam
 (C) Dove tailed seam (D) Paned down seam
97. Which hammer is used when damaged vehicle bodies are to be heated and reshaped?
 (A) Circular faced hammer
 (B) Ball faced and square faced bottom hammer
 (C) Cylindrical top pane and round and flat faced hammer
 (D) Top circular and bottom square faced hammer
98. Which aluminium alloy is used for aircraft industry?
 (A) Aldural (B) Aluminium bronze
 (C) Duralumin (D) 'Y' alloy
99. How many rectangular pieces of 50 cm × 20 cm can be cut from a sheet 1000 cm × 500 cm?
 (A) 250 (B) 500
 (C) 750 (D) 1000
100. $\sin 30^\circ = \frac{1}{2}$, the value of $\sin 60^\circ$ is :
 (A) $\frac{1}{\sqrt{3}}$ (B) $\frac{2}{\sqrt{3}}$
 (C) $\frac{\sqrt{3}}{2}$ (D) $\sqrt{3}$
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SPACE FOR ROUGH WORK

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