

202/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The thickness of the SWG No : 10 is :  
(A) 2.6 mm (B) 3.2 mm  
(C) 2 mm (D) 1.6 mm
2. Maximum SWG number is :  
(A) 50 (B) 1  
(C) 1/0 (D) 7/0
3. Mass/unit area for 1 mm thick steel is :  
(A) 8.65 Kg/m<sup>2</sup> (B) 7.73 Kg/m<sup>2</sup>  
(C) 5.3 Kg/m<sup>2</sup> (D) 6.66 Kg/m<sup>2</sup>
4. Unit of force in S.I system :  
(A) Kg (B) Kgf  
(C) N (D) N-m
5. What is Young's modulus of elasticity?  
(A) force/area (B) load/area  
(C) stress/strain (D) strain/stress
6. Unit of stress in S.I system :  
(A) N/m (B) N/m<sup>1</sup>  
(C) N/m<sup>2</sup> (D) N/m<sup>3</sup>
7. Melting point of pure aluminum is :  
(A) 419°C (B) 660°C  
(C) 232°C (D) 1300°C
8. Density is :  
(A) mass/area (B) mass/volume  
(C) force/area (D) volume/mass

9. Melting point of Tin is :
- (A) 419°C (B) 660°C  
(C) 232°C (D) 1300°C
10. Volume of sphere of radius 'r' is :
- (A)  $1/3\pi r^3$  (B)  $4/3\pi r^3$   
(C)  $2/3\pi r^3$  (D)  $\pi r^3$
11. Unit of length in metric system :
- (A) inch (B) mm  
(C) cm (D) m
12. The perimeter of a circle diameter 'd' is :
- (A)  $\pi d$  (B)  $2\pi d$   
(C)  $1/3\pi d$  (D)  $4/3\pi d$
13. Which is the lowest value?
- (A) 1/2 (B) 1/3  
(C) 1/4 (D) 2/3
14. The value of  $5/100 + 3/1000$  is :
- (A) 5.3 (B) 0.53  
(C) 0.053 (D) 0.0053
15. Unit of electric current is :
- (A) Volt (B) Amp  
(C) Watts (D) Ohm
16. Mallet is made of :
- (A) steel (B) wrought iron  
(C) hard wood (D) cast iron
17. Angle of dot punch is :
- (A) 30° (B) 45°  
(C) 60° (D) 90°

18. If wire diameter 'D' the wiring allowance for sheet metal work is :
- (A) 1.5 D (B) 2 D  
(C) 2.5 D (D) 3 D
19. Which is the leak proof joint in sheet metal work?
- (A) pane (B) grooved  
(C) lock grooved (D) riveted
20. The ability of material to resist fracture due to high impact load is :
- (A) strength (B) stiffness  
(C) toughness (D) hardness
21. The property of material which enables it to retain the deformation permanently is :
- (A) brittleness (B) ductility  
(C) malleability (D) plasticity
22. Which of the following material has maximum ductility?
- (A) mild steel (B) copper  
(C) aluminum (D) zinc
23. The property of a material due to which it breaks with little permanent distortion :
- (A) brittleness (B) ductility  
(C) malleability (D) plasticity
24. Which of the following material has maximum malleability?
- (A) copper (B) soft steel  
(C) wrought iron (D) lead
25. Iron ore is usually found in form of :
- (A) oxides (B) hematite  
(C) limonite (D) pyrite
26. Steel containing 0.8 to 1.5% carbon is known as :
- (A) mild steel (B) dead mild steel  
(C) medium carbon steel (D) high carbon steel

27. Cutting tools are made from :
- (A) nickel steel (B) chrome steel  
(C) high speed steel (D) silicon steel
28. Which of the following is an amorphous material?
- (A) glass (B) mica  
(C) lead (D) brass
29. The heat treatment process used for softening hardened steel :
- (A) carburizing (B) normalizing  
(C) annealing (D) tempering
30. Which of the following is a case hardening process?
- (A) carburizing (B) cyaniding  
(C) nitriding (D) all of the above
31. Brass is an alloy of :
- (A) copper & zinc (B) copper & tin  
(C) copper, zinc & tin (D) none of the above
32. Bronze is an alloy of :
- (A) copper & zinc (B) copper & tin  
(C) copper, zinc & tin (D) none of the above
33. Structural sections which as rail, angles, I Beams are made by :
- (A) hot rolling (B) hot drawing  
(C) hot extrusion (D) hot spinning
34. The parts of circular cross section which are symmetrical about the axis of rotation are made by :
- (A) hot forging (B) hot spinning  
(C) hot extrusion (D) hot drawing

35. The process extensively used for making bolt and nut is :
- (A) hot piercing (B) extrusion  
(C) cold peening (D) cold heading
36. The process of increasing the cross section of a bar and decrease its length is called :
- (A) drawing-down (B) upsetting  
(C) spinning (D) peening
37. The process of decreasing the cross-section of a bar and increasing its length is called :
- (A) drawing down (B) upsetting  
(C) spinning (D) peening
38. The operation of cutting a cylindrical hole in a sheet of metal by the punch and the die is called :
- (A) shearing (B) piercing  
(C) punching (D) blanking
39. The operation of cutting a flat sheet to the desired shape is called :
- (A) shearing (B) piercing  
(C) punching (D) blanking
40. The operation of cutting a sheet of metal in a straight line along the length is known as :
- (A) plunging (B) notching  
(C) slitting (D) forming
41. The operation of bending a sheet of metal along a curved axis is known as :
- (A) plunging (B) notching  
(C) slitting (D) forming
42. The operation of producing cup shaped parts from flat sheet metal blanks by bending and plastic flow of metal is known as :
- (A) drawing (B) squeezing  
(C) coining (D) embossing
43. The operation of straightening a curve sheet metal is known as :
- (A) drawing (B) squeezing  
(C) coining (D) planishing

44. Blanking and piercing operation can be performed simultaneously in a :
- (A) single die (B) progressive die  
(C) compound die (D) combination die
45. Cutting and forming operation can be performed in a single operation in a :
- (A) single die (B) progressive die  
(C) compound die (D) combination die
46. In piercing operation, the clearance is provided on :
- (A) punch (B) die  
(C) half on the punch & half on the die (D) either on punch or die
47. In blanking operation, the clearance is provided on :
- (A) punch  
(B) die  
(C) half on the punch & half on the die  
(D) either on punch or die
48. Lap joints are employed on plates having thickness :
- (A) less than 3 mm (B) 5 to 10 mm  
(C) 12.5 mm (D) above 25 mm
49. Seam welding is best adopted for metal thickness ranging from :
- (A) 0.025 to 3 mm (B) 3 to 5 mm  
(C) 5 to 8 mm (D) 8 to 10 mm
50. Acetylene gas is stored in cylinder in the form of :
- (A) solid (B) liquid  
(C) gaseous (D) any one of the form
51. The oxygen cylinder is usually painted with :
- (A) black colour (B) white colour  
(C) maroon colour (D) yellow colour

52. Flux commonly used in brazing is :
- (A) zinc chloride (B) ammonium chloride  
(C) rosin plus (D) borax
53. A zinc diffusion process is called :
- (A) galvanizing (B) anodizing  
(C) parkerising (D) sheradising
54. In order to cut mild steel, the cutting angle of chisel should be :
- (A) 30° (B) 45°  
(C) 50° (D) 60°
55. The cold chisel are made by:
- (A) drawing (B) rolling  
(C) piercing (D) forging
56. The cross section of a chisel is usually :
- (A) circular (B) square  
(C) hexagonal (D) octagonal
57. The cutting edge of a chisel should :
- (A) hardened (B) tempered  
(C) annealed (D) hardened and tempered
58. A hacksaw blade cuts on the :
- (A) forward stroke  
(B) return stroke  
(C) both return and forward  
(D) cutting depends up on the direction of force
59. A hack saw blade is specified by its :
- (A) length (B) materials  
(C) width (D) number of teeth

60. To prevent the body of the blade from jamming in the saw cut ; the teeth of the blade are :
- (A) strengthened (B) sharpened  
(C) set (D) all of the above
61. A file with 20 teeth in 25 mm is called :
- (A) rough file (B) bastard file  
(C) second cut file (D) smooth file
62. A file removes the metal during :
- (A) forward stroke (B) return stroke  
(C) both forward and return stroke (D) none of the above
63. The type of file used for a wood work is :
- (A) single cut file (B) double cut file  
(C) rasp cut file (D) any one of the above
64. The instrument used to measure external and internal diameter of shafts, thickness of parts and depth of holes is :
- (A) outside micrometer (B) vernier caliper  
(C) inside micrometer (D) depth gauge micrometer
65. The accuracy of micrometers, calipers, dial indicators can be checked by :
- (A) feeler gauge (B) slip gauge  
(C) ring gauge (D) plug gauge
66. A ring gauge is used to :
- (A) check the diameter of shafts  
(B) test the accuracy of holes  
(C) check the clearance between two mating surface  
(D) all of the above
67. The drill spindles are provided with standard taper known as :
- (A) morse taper (B) seller taper  
(C) champman taper (D) brown and sharp taper