

126/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. While soldering what action is applied on solder?
(A) Capillary action (B) Gravitational force
(C) Electromagnetic force (D) Magnetic action
2. Which one of these a pressure welding method?
(A) ARC welding (B) Gas welding
(C) Resistance welding (D) Thermit (fusion) welding
3. Which of the following is not an insulator?
(A) Gold (B) Glass
(C) Mica (D) Wood
4. Which type of fire extinguisher is used in a welding shop?
(A) Form type extinguisher (B) CO₂ extinguisher
(C) Dry powder extinguisher (D) Halon extinguisher
5. The term used to indicate amount of current flow in a circuit is called :
(A) Volt (B) Farad
(C) Ohm (D) Ampere
6. The depression formed at the end of the weld is named as :
(A) Pin hole (B) Crater
(C) Blowhole (D) Crack
7. The semicircular deposits on the weld head are called :
(A) Sealing run (B) Crater
(C) Reinforcement (D) Undercut
8. The angle formed between the line of the weld root and horizontal reference plane is called :
(A) Weld slop (B) Weld rotation
(C) Axis of the weld (D) Weld angle

9. Transferred arc process and non transferred arc process are the classification of _____ welding process.
- (A) Stud (B) Submerged arc
(C) Plasma (D) Friction
10. In _____ position the pipe in 45° Inclined and fixed and welding has been done in various positions.
- (A) 1G (B) 2G
(C) 5G (D) 6G
11. 212°C Fahrenheit is _____ ° centigrade.
- (A) 50°C (B) 25°C
(C) 100°C (D) 75°C
12. Name the simplest test which uses sound to know that there is a crack in a weld :
- (A) Stethoscopic (B) Ultra sonic
(C) Gamma ray test (D) X-ray test
13. Austenitic Stainless steel contains _____ % chromium.
- (A) 6 to 12 (B) 0.25 to 0.5
(C) 20 to 30 (D) 16 to 22
14. Which Instrument is used to mark straight line mark on base plate parallel to a plate edge?
- (A) Divider (B) Odd leg caliper
(C) Outside caliper (D) Inside caliper
15. Arc blow is found with welding of :
- (A) Bare electrode (B) Coated electrode
(C) Low hydrogen electrode (D) Heavy coated electrode
16. Lack of penetration is due to :
- (A) High current (B) Low current
(C) Short arc length (D) Too slow welding speed

17. Which one of the easiest welding position :
- (A) Vertical (B) Overhead
(C) Horizontal (D) Down hand
18. Two methods of flux coating on electrodes are :
- (A) Sucking and blowing (B) Blowing and pasting
(C) Dipping and extrusion (D) Blasting and heating
19. The purity of Acetylene is checked the filter paper soaked in 10% silver nitrate solution against the stream of acetylene. The filter paper changes in to :
- (A) Black Colour (B) Blue colour
(C) Red colour (D) Brown colour
20. Which one of the following is a non destructive test?
- (A) Impact test (B) Tensile test
(C) Nick break test (D) Magnetic particle test
21. The unit of measurement of heat is :
- (A) Centigrade (B) Calorie
(C) Fahrenheit (D) Temperature
22. Which metal is more root opening, wider groove angle and more number of tack welds are essential in arc welding?
- (A) Copper (B) Cast iron
(C) Mild steel (D) Stainless steel
23. Light hammering of the weld metal immediately after weld deposition. It is a method to prevent distortion :
- (A) Cracking (B) Knocking
(C) Peening (D) Chipping
24. The third compartment contains in the purifier is :
- (A) Purifying chemicals (B) Water
(C) Pumice stone (D) Filter wool

25. Name the metal which does not allow X-rays to pass through it :
- (A) Tin (B) Zinc
(C) Lead (D) Copper
26. Which physical property of metals helps retaining the molten metal deposited on the joint in over head welding?
- (A) Thermal contraction (B) Surface tension
(C) Magnetic attraction (D) Density
27. Friction welding is suitable to weld :
- (A) Rectangle Job (B) Square Job
(C) Irregular Job (D) Circular Job
28. The welding blow pipe nozzle size for welding 3 mm sheet :
- (A) 7 (B) 5
(C) 2 (D) 10
29. In arc welding eyes need to be protected against :
- (A) Intense glare (B) Sparks
(C) Ultra violet rays (D) Infra red rays
30. Which of the following welding process uses non consumable electrode?
- (A) Laser welding (B) TIG welding
(C) MIG welding (D) Thermit welding
31. The main criterion for selection of electrode diameter in arc welding :
- (A) Thickness of materials (B) The materials to be welded
(C) Voltage used (D) Current used
32. The cutting angle of a straight Snips is :
- (A) 70° (B) 82°
(C) 87° (D) 60°
33. Name the instrument /tool used for transfer and setting off distances :
- (A) Steel rule (B) Straight edge
(C) L-Square (D) Wing compass

34. The correct electrode angle is used in Arc welding with the weld line is :
- (A) 70-80°C (B) 45°C
(C) 40-50°C (D) 90°C
35. What is the identification of tip colour for 2% thorium added tungsten electrode?
- (A) Green (B) Yellow
(C) Red (D) Brown
36. What is the name of space left blank in the gas cutting?
- (A) Drag (B) Groove
(C) Kerf (D) Space
37. What type of heat treatment is used to get the original grain structure?
- (A) Tempering (B) Preheating
(C) Hardening (D) Normalizing
38. Seam welding is a :
- (A) Multi spot welding process (B) Continuous welding process
(C) Used to form mess (D) Used for welding cylindrical object
39. A non distinctive test requires a photographic film to be placed on one side of the joint to be tested. What is the test?
- (A) Ultra sonic test (B) Dye penetrate test
(C) Radiographic test (D) Magnetic particle test
40. Welding Transformers are equipped with condensers. So as to :
- (A) Current factor (B) Energy factor
(C) Voltage factor (D) Power factor
41. In gas cut plate the cut shows grooves and has deep draglines. This is due to :
- (A) Tip too close to the cut surface (B) Too much Travel speed
(C) Less oxygen pressure (D) Smaller size cutting nozzle
42. Electrode holders are made out of :
- (A) Aluminum and their alloys (B) Zinc and their alloys
(C) Copper and their alloys (D) Steel and their alloys

43. An alloy used in Brazing process is :
- (A) Solder (B) Lead
(C) Thermit (D) Spelter
44. The tip angle of centre punch is :
- (A) 30° (B) 15°
(C) 90° (D) 60°
45. One type of inert gas welding is :
- (A) CO₂ welding (B) TIG welding
(C) Atomic hydrogen arc welding (D) Termite welding
46. The melting Temperature of Alumina (Al₂O₃) is :
- (A) 659°C (B) 1200°C
(C) 2030°C (D) 1650°C
47. Which position is tough to weld for beginners?
- (A) Flat (B) Vertical
(C) Horizontal (D) Overhead
48. The deviation of arc is called arc blow. It is caused by :
- (A) Electrical disturbance (B) Magnetic disturbance
(C) Electronic disturbance (D) Radio disturbance
49. The two plates are lying in same plane and joint together. These types of Joints are called :
- (A) Lap joint (B) Edge joint
(C) 'T' joint (D) Butt joint
50. The depth of fusion from the surface of the weld metal is :
- (A) Fusion zone (B) Heat affected zone
(C) Penetration (D) Leg length
51. The flux coating of electrode contains cellulosic material coating. These electrodes are :
- (A) Low hydrogen (B) Iron powder electrode
(C) Deep penetration electrode (D) Heavy coated electrode

52. The left handed threaded valves is used in which gas cylinder?
(A) C_2H_2 (B) O_2
(C) CO_2 (D) NH_3
53. Granular flux and bare wire electrode is used in which type of welding?
(A) MIG (B) SAW
(C) TIG (D) MAG
54. Which one of the following is cause backfire in Oxy Acetylene blow pipe?
(A) Nozzle is over heated (B) Nozzle orifice blocked
(C) Leakage near the nozzle (D) Gas pressure setting is high
55. AWS code of electrodes starts with the letter 'E' followed by four digit number. What is the fourth digit number?
(A) Welding position (B) Type of flux coating
(C) Current condition (D) Tensile Strength
56. Gray cast iron is a type of material which can weld. It contains _____ % of carbon.
(A) 3 to 4% (B) 6 to 8%
(C) 1 to 2% (D) 10 to 12%
57. In submerged arc welding _____ type of flux is used.
(A) Powder (B) Paste
(C) Granular (D) Form
58. Fahrenheit scale is a type of meter scale. It has _____ equal division.
(A) 100 (B) 180
(C) 80 (D) 120
59. The diameter of electrode and the arc length are equal. That type of arc length is called?
(A) Long arc length (B) Medium arc length
(C) Short arc length (D) None of the above
60. Oxygen cylinders can store gas to a capacity of 7M3 with the pressure ranging between :
(A) 120-150 Kg/cm² (B) 100-110 kg/cm²
(C) 150-180 Kg/cm² (D) 50-60 Kg/cm²

61. The hottest temperature oxy acetylene flame is :
- (A) Neutral flame (B) Carburizing flame
(C) Oxidizing flame (D) Oxy LPG flame
62. The nozzle size of blow pipe for gas welding 4 mm thick plates :
- (A) 10 (B) 2
(C) 25 (D) 5
63. In high pressure oxy acetylene plant the maximum pressure of acetylene gas is :
- (A) 5 Kg/cm² (B) 15 Kg/cm²
(C) 20 Kg/cm² (D) 25 Kg/cm²
64. For complete combustion one volume of acetylene requires _____ volume of oxygen.
- (A) 3 (B) 5
(C) 1.5 (D) 2.5
65. Commutators are made out of :
- (A) Mild segment (B) Aluminum segments
(C) Copper segments (D) Cast iron segments
66. In straight polarity the heat distribution in electrode side is :
- (A) 1/3 (B) 2/3
(C) 3/3 (D) 1/2
67. $\frac{1}{4}$ of $\frac{3}{5}$ of $\frac{6}{5}$ a Number is 54. What is the number?
- (A) 280 (B) 250
(C) 300 (D) 150
68. The value of x and y for the equation $X+3Y=15$ and $5X-2Y=7$ are :
- (A) 5, 3 (B) 4, 3
(C) 3, 5 (D) 3, 4
69. If the diagonal of a square is $6\sqrt{3}$. Then the area of this square will be :
- (A) 66 (B) 50
(C) 60 (D) 54

70. This metal transfer method is not used in MIG/MAG welding process :
- (A) Spray transfer (B) Repelled transfer
(C) Dip transfer (D) Globular transfer
71. For all structural work ferrous metals are used. What is the advantage of ferrous metals over non ferrous metals?
- (A) Can be easily welded
(B) Available in large quantity
(C) Cheaper in large quantities
(D) Better mechanical and physical properties
72. Which is the correct method to remove the chips from the file?
- (A) Blow away the chip (B) Brush the chip away
(C) Flush the chip with water (D) Flush the chip with coolant
73. Intermittent welding method is used to :
- (A) Minimize the amount of weld metal
(B) Get uniform distribution of heat over welding joint
(C) Reduce the residual stress in joint
(D) Plates expanded to a lesser degree with head each
74. What is the correct procedure for reconditioning a bell mouthed tip of an oxy acetylene welding nozzle?
- (A) Filing the tip end (B) Replace the tip
(C) Ream the orifice to a large size (D) None
75. Argon gas cylinder is painted _____ colour.
- (A) Red (B) Black
(C) Brown (D) Blue
76. S.I. unit of force is :
- (A) Watt (B) Joule
(C) Newton (D) Kg m

77. Mechanical efficiency of simple machine is?
 (A) Load/Effort (B) Effort/load
 (C) Mechanical advantage/velocity ratio (D) Velocity ratio/mechanical Advantages
78. The property of which metal can be drawn into wires without breaking is known as :
 (A) Brittleness (B) Hardness
 (C) Malleability (D) Ductility
79. The size of the title block for all size of drawing sheet is _____mm to _____mm.
 (A) 110 to 225 (B) 185 to 65
 (C) 200 to 30 (D) 125 to 24
80. In first angle projection method the object comes between the _____ and the _____.
 (A) none of the below (B) observer and object
 (C) plane and object (D) observer and plane
81. In third angle projection method the plans comes between the _____ and the _____.
 (A) Observer and plane (B) Observer and object
 (C) Plane and object (D) None of the above
82. Centre lines locus lines and pitch circle are drawn as :
 (A) Thick continuous line (B) Thin continuous line
 (C) Long and thin chain lines (D) Dashed line of medium thickness
83. The form of a welded joint is specified by means of a symbol. Its location is indicated by an _____ and a _____.
 (A) Axis and size (B) Arrow and dashed line
 (C) Axis and centre lines (D) Arrow and reference line
84. To prevent leakage through the Riveted Joint. The plates are firmly forced together by _____and _____.
 (A) Caulking and fullering (B) Punching and squeezing
 (C) Peening and pulling (D) Soldering and brazing

85. It is a temporary fastening :
- (A) Riveting (B) Nut and bolt
(C) Soldering (D) Brazing
86. _____ is not an inert gas used in MAG welding.
- (A) Argon (B) Helium
(C) CO₂ (D) Neon
87. Brass is a alloy of :
- (A) Copper and zinc (B) Copper and tin
(C) Copper and lead (D) Copper and bronze
88. The operation consists of depositing a layer of hard metal on a softer base metal in order to provide surface having hardness and resistance to abrasion :
- (A) Hardening (B) Hard facing
(C) Arc welding (D) Tempering
89. The melting point of tungsten is :
- (A) 1232°C (B) 2200°C
(C) 1426°C (D) 3410°C
90. Which defect can be found by visual examination of the weld joint?
- (A) Misalignment of parts (B) Lack of fusion
(C) Root defect in a 'T' filler weld (D) Inter lead slag inclusion
91. Which type of test is hazardous to the testing operator?
- (A) Ultrasonic test (B) X-ray test
(C) Magnetic particle test (D) Dye-penetrant test
92. In an examination 93% of the student passed and 259 failed. The total number of students must be :
- (A) 3950 (B) 500
(C) 3700 (D) None of the above

93. Volume of a sphere of radius 'R' is :
- (A) $4/3\pi R^3$ (B) $1/3\pi R^3$
 (C) $2/3\pi R^3$ (D) $4/3\pi R^2$
94. What is the size of gas nozzle used for 6 mm diameter tungsten in TIG welding process?
- (A) 10 (B) 11.5
 (C) 12 (D) 16
95. What does the letter 'k' indicate in the electrode coating EB5426H₁kX?
- (A) Iron powder electrode with 130 to 149% recovery
 (B) Iron powder electrode with 110 to 129% recovery
 (C) Radiography quality electrode
 (D) Low hydrogen electrode
96. If a worker has suffered from electric shock, he should be :
- (A) Given an alcoholic drink (B) Given a cold drink
 (C) Made to walk (D) Kept warm and covered
97. Which of the following resistance welding machine is used to join pipe sections end to end?
- (A) Projection (B) Butt
 (C) Spot (D) Seam
98. In MIG/MAG welding filler wire is used, when the filler wire is copper coated?
- (A) To prevent base metal reaction (B) To prevent atmosphere
 (C) To prevent gas shield (D) To prevent rust
99. In which solution the filter paper is soaked to test the purity of generated acetylene gas?
- (A) Copper sulphate (B) Silver nitrate
 (C) Caustic soda (D) Sodium nitrate
100. _____ is the distance between the end of the contact tube and the tip of the electrode in GMAW process.
- (A) Stick out (B) Arc length
 (C) Tip to work distance (D) Gangue length