

**020/2025**

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. The correct point angle of a chisel depend on the :  
(A) Material of the chisel (B) Depth of cut  
(C) Hammering force given (D) Material to be chipped
2. Files are specified according to their :  
(A) Length and grade (B) Length, grade and shape  
(C) Length, grade, cut and shape (D) Length and cut
3. Which part of a hammer is meant for fixing handle rigidly?  
(A) Eye hole (B) Cheek  
(C) Pein (D) Wedge
4. The ignition temperature of steel for oxy-acetylene gas cutting is :  
(A) 375 to 475 °C (B) 100 to 150 °C  
(C) 1500 to 1530 °C (D) 875 to 900 °C
5. The cutting nozzle size is given by the \_\_\_\_\_ of the cutting orifice in mm.  
(A) Diameter (B) Radius  
(C) Area (D) None of the above
6. Oxygen gas cylinders can store gas to a capacity of :  
(A) 7 m<sup>3</sup> (B) 6 m<sup>3</sup>  
(C) 1 m<sup>3</sup> (D) 1.6 m<sup>3</sup>
7. Acetylene gas is generated from :  
(A) Calcium carbide and potassium nitrate  
(B) Calcium carbide and water  
(C) Zinc sulphate and water  
(D) Water and barium chloride
8. Which oxy-acetylene welding flame is used for welding mild steel?  
(A) Neutral flame (B) Carburising flame  
(C) Oxidising flame (D) Reducing flame

**A**

**3**

**[P.T.O.]**

9. The selection of flux in gas welding depends upon :
- (A) Composition of material to be joined
  - (B) Thickness of material
  - (C) Welding position
  - (D) Type of fuel gas
10. What is the special method for safe storage of acetylene gas in cylinder?
- (A) Stored in gaseous form
  - (B) Stored in the solid form
  - (C) Stored in semi liquid form
  - (D) Stored as dissolved gas in liquid acetone
11. Low pressure blow pipe is also called :
- (A) Equal pressure blow pipe
  - (B) Non injector blow pipe
  - (C) Injector blow pipe
  - (D) Automatic blow pipe
12. The angle of blow pipe to the line of weld in right ward welding technique?
- (A)  $30^\circ$  to  $45^\circ$
  - (B)  $50^\circ$  to  $60^\circ$
  - (C)  $10^\circ$  to  $20^\circ$
  - (D)  $40^\circ$  to  $50^\circ$
13. Which one of the following is not a form of flux in gas welding?
- (A) Coil
  - (B) Powder
  - (C) Paste
  - (D) Liquid
14. Number of pin holes formed on the surface of the deposited metal is called
- (A) Undercut
  - (B) Porosity
  - (C) Cracks
  - (D) Burnthrough
15. Weldable type of cast iron is :
- (A) Nodular cast iron
  - (B) Malleable cast iron
  - (C) White cast iron
  - (D) Grey cast iron
16. Which of the following is an advantages of high pressure system of gas welding?
- (A) Working efficiency is more
  - (B) More chances of accidents
  - (C) Less expensive
  - (D) Both injector and non injector type blow pipes can't be used

17. What is the first compartment contained in the purifier?  
(A) Purifying materials (B) Pumice stone  
(C) Filter wool (D) Water
18. The melting point of zinc :  
(A) 419 °C (B) 950 °C  
(C) 1083 °C (D) 1930 °C
19. Aluminium is classified in to \_\_\_\_\_ main groups.  
(A) 5 (B) 2  
(C) 3 (D) 4
20. \_\_\_\_\_ is a groove or channel formed along the toe of the weld on one side or both sides.  
(A) Crater (B) Under cut  
(C) Key hole (D) Penetration
21. What is the substance used as a coolant in spot welding ?  
(A) Air (B) Water  
(C) Oil (D) Kerosene
22. Which one of the following is an example of resistance welding?  
(A) Thermit welding (B) Laser beam welding  
(C) Spot welding (D) All are correct
23. The fusion is produced by the heat obtained from a concentrated beam composed in Electron Beam welding, primarily of :  
(A) Velocity (B) Vacuum chamber  
(C) Focussing coil (D) High velocity of electrons
24. Which of the following resistance welding machine is used to join pipe sections in end-to-end?  
(A) Spot welding (B) Butt welding  
(C) Seam welding (D) Projection welding
25. Which of the following operating variable in Submerged Arc welding controls the arc length?  
(A) Welding voltage (B) Welding speed  
(C) Welding current (D) Stick out

26. Which of the following is not an advantage of resistance welding?  
(A) Widely used for sheet metals (B) The equipment is costly  
(C) Speedy process (D) No distortion
27. Which one of the following property of flux is used in Electro Slag welding?  
(A) It has high electrical resistance  
(B) It is refractory in nature  
(C) It has very low electrical resistance  
(D) It is difficulty to melt
28. The reaction takes place in thermit welding is :  
(A) Endothermic (B) Exothermic  
(C) Combustion (D) Decombustion
29. In thermit welding heat is produced between \_\_\_\_\_ and iron oxide in right proportion.  
(A) Magnesium powder (B) Copper  
(C) Lead (D) Aluminium powder
30. Which is an advantage of Friction welding?  
(A) Less thickness of sections cannot be welded  
(B) Only butt joints can be done  
(C) No filler rod or electrode is required  
(D) There is a burr surrounding the weld area
31. Which of the following statement is/are correct about Laser Beam welding?  
(i) A single frequency light beam is used  
(ii) The light energy is put in to a single molecule of a substance (Ruby or CO<sub>2</sub>) to create the beam  
(iii) This process is used for welding small light materials  
(A) Only (i) and (ii)  
(B) All of the above (i), (ii) and (iii)  
(C) Only (i) and (iii)  
(D) Only (ii) and (iii)
32. The multi spot welding is :  
(A) Projection welding (B) Spot welding  
(C) Seam welding (D) Percussion welding

33. Thermit welding is a form of :
- (A) Resistance welding (B) Forge welding  
(C) Fusion welding (D) Pressure welding
34. Which type of joint is required for spot welding?
- (A) Corner joint (B) Butt joint  
(C) Lap joint (D) T joint
35. Electron beam welding is an automatic process performed in \_\_\_\_\_ without a shielding gas.
- (A) Vacuum (B) Circle  
(C) Area (D) Light
36. A welder qualification test is to verify :
- (A) The quality of the material (B) Skill of the welder  
(C) The manufacturing method (D) DT and NDT details
37. WPS means?
- (A) Welder performance in service (B) Weld procedure specification  
(C) Weld product and service (D) Welding production and skill
38. Which of the following destructive test is related to izod and charpy machines?
- (A) Impact test (B) Bend test  
(C) Fatigue test (D) Tensile test
39. The surface and sub-surface cracks in the weldment of magnetic alloys can be inspected by :
- (A) X-ray(radiography) test (B) Eddy current testing  
(C) Ultrasonic testing (D) Magnetic particle test
40. Guided bend test is used to determine \_\_\_\_\_ of the weld metal.
- (A) Ductility (B) Impact value  
(C) Tensile strength (D) Percentage of elongation
41. The temperature of plasma arc cutting is:
- (A) 20000 °K (B) 10000 ° K  
(C) 17000 °K (D) 46000 °K

42. Stainless steel can be cut easily by :
- (A) Plasma arc cutting (B) Oxy- fuel cutting  
(C) (A) and (B) are correct (D) (A) and (B) are not correct
43. \_\_\_\_\_ is done to build up worn out parts of material whose dimensions have been affected and make them as good as new and obtain the required properties.
- (A) Tempering (B) Case hardening  
(C) Surfacing (D) Peening
44. Which flame is used for hard facing?
- (A) Neutral (B) Carburising  
(C) Oxidising (D) All are correct
45. Post heating \_\_\_\_\_ the ratio of cooling of a welded joint.
- (A) Accelerates (B) Regular  
(C) Retards (D) Equilise
46. A short arc will reduce :
- (A) Arc blow (B) Distortion  
(C) Penetration (D) Welding crack
47. The distance between the tip of the electrode and the parent metal where the arc strike is called :
- (A) Arc gap (B) Arc length  
(C) Arc distance (D) Arc width
48. Some time in electric arc welding, arc gives out more spatters it is due to :
- (A) High welding current (B) Low welding current  
(C) High welding speed (D) Short arc length
49. In the electrode coating ER4211, what does the 'R' Indicate :
- (A) Types of covering (B) Welding position  
(C) Tensile strength of the joint (D) Welding current
50. The electrode, which deposits a more amount of weld metal per unit time is called :
- (A) Basic coated electrode (B) Iron powder electrode  
(C) Heavy coated electrode (D) Deep penetration electrode

51. A device designed for checking the shape and size of welding is called :
- (A) Weld dial (B) Weld gauge  
(C) Weld indicator (D) Weld template
52. Welding transformers are equipped with condensers so as to improve :
- (A) Power factor (B) Energy factor  
(C) Voltage factor (D) Current factor
53. A depression formed at the end of the weld is called :
- (A) Pin hole (B) Crater  
(C) Blow hole (D) Crack
54. Electrode used for arc welding of aluminium contain 95% aluminium and :
- (A) 5% silicon (B) 5% manganese  
(C) 5% sulphur (D) 5% phosphorus
55. The process of hammering the weld metal immediately after it is deposited is called :
- (A) Tinning (B) Peening  
(C) Pressing (D) Dressing
56. What is the name of semi-circular deposit on a weld bead?
- (A) Reinforcement (B) Sealing run  
(C) Under cut (D) Crater
57. What is the name of joint if two members welded in the same plane?
- (A) Lap joint (B) Tee joint  
(C) Butt joint (D) Edge joint
58. What is the conversion function of a rectifier?
- (A) AC to AC (B) DC to DC  
(C) AC to DC (D) DC to AC
59. Which one of the following pipes welding stands for 45 ° inclined position welding?
- (A) 1G (B) 2G  
(C) 3G (D) 6G

60. What is the defined as vertical position of groove welding?
- (A) 1G (B) 2G  
(C) 3G (D) 4G
61. What is the purpose of wrapping the weld cable around the job in welding?
- (A) To control arc blow (B) To control arc speed  
(C) To control arc length (D) To control distortion
62. When H<sub>2</sub> control is specified for a manual metal arc welding project, the electrode would normally?
- (A) Cellulose (B) Iron oxide  
(C) Acid (D) Basic
63. For open site manual metal arc welding the following equipment is available. Which would you choose for safe working?
- (A) Single operator transformer  
(B) Multi operator transformer  
(C) AC/DC Composite power unit  
(D) Diesel engine driven motor generator
64. Silicon is added to electrode coating as :
- (A) A shipping agent (B) A slag former  
(C) A de-oxidant (D) A colouring agent
65. When welding thin plate distortion can be minimised by?
- (A) Welding from both side  
(B) Using U preparation rather than V type  
(C) Using strong back  
(D) Using back step welding
66. What is the non-consumable electrode of high melting point used in TIG welding?
- (A) Carbon electrode (B) Copper electrode  
(C) Tungsten electrode (D) Aluminium electrode
67. How heat affected zone is covered and protected from atmospheric contaminations in GTAW?
- (A) Inert gas (B) Oxygen gas  
(C) Fuel gas (D) Active gas



68. Which type of tungsten electrode is suitable for welding stainless steel by TIG process with DC ?
- (A) Pure tungsten electrode (B) Cerium tungsten electrode  
(C) Thoriated tungsten electrode (D) Zirconium tungsten electrode
69. Which type of current supply is best suited for GTAW of aluminium and its alloys?
- (A) AC (B) DC  
(C) DCSP (D) DCRP
70. What is the defect while TIG welding if the current is too low?
- (A) Crack (B) Porosity  
(C) Under cut (D) Lack of fusion
71. What is the name electronic unit that helps to initiate the arc in TIG welding process?
- (A) Low frequency unit (B) Medium frequency unit  
(C) High frequency unit (D) Double frequency unit
72. Which one is added with tungsten to increase the current carrying capacity in TIG welding?
- (A) Thorium oxide (B) Iron oxide  
(C) Flux (D) Non -metal oxide
73. State the reason for using an AC power source in the TIG welding process while welding aluminium :
- (A) It clean aluminium oxide  
(B) AC welding transformer is cheaper machine  
(C) No arc blow effect  
(D) The efficiency of transformer is high
74. TIG welding nozzles are made by :
- (A) Aluminium (B) Copper  
(C) Brass (D) Ceramic
75. Colour identification of tungsten with 2% thorium TIG electrode is :
- (A) White (B) Red  
(C) Yellow (D) Orange

76. In following gases which one is recommended for welding of steel?
- (A) Argon -helium (B) Argon - hydrogen  
(C) Argon - nitrogen (D) All the above
77. Stainless steel is mostly welded by TIG welding in :
- (A) DCSP (B) DCRP  
(C) ACSP (D) AC
78. EWP “E” stands for an :
- (A) Electrode (B) Element  
(C) Emission (D) None of these
79. ISO Stands for :
- (A) International organization for standardization  
(B) Indian standard organization  
(C) Industrial standard organization  
(D) Institute standard organization
80. Which shielding gas will produce smooth arc in TIG welding?
- (A) Helium (B) Argon  
(C) Carbon dioxide (D) Oxygen
81. What is also referred as a GTAW?
- (A) TIG welding (B) MIG welding  
(C) MAG welding (D) GAS welding
82. Argon gas backing is called for when TIG welding austenitic stainless steel pipe this is to :
- (A) Prevent oxidation  
(B) Prevent under bead cracking  
(C) Prevent porosity  
(D) Control the penetration bead shape
83. In current/polarity used for TIG welding of all materials except aluminium and magnesium is :
- (A) DC negative (B) DC positive  
(C) AC (D) Square wave AC

84. Pipe bores of some materials must be purged with argon before and during TIG welding in order to :
- (A) Prevent linear porosity
  - (B) Prevent burn through
  - (C) Prevent oxidation of the root bead
  - (D) Eliminate moisture of the root bead
85. In TIG welding what is the benefit of a current slope out device? It reduce :
- (A) Tungsten spatter
  - (B) Risk of crater cracking
  - (C) Risk of arc strikes
  - (D) Inter pass temperature
86. Which one of the following is most commonly used power supply for GMAW?
- (A) AC
  - (B) DCEP
  - (C) DCEN
  - (D) None of the above
87. The electrode extended from the end of the contact tip of the welding gun to the arc is called :
- (A) Stick-up
  - (B) Stick down
  - (C) Stick in
  - (D) Stick out
88. There are four modes of metal transfer in GMAW, which one is considered least desirable?
- (A) Globular
  - (B) Short circuiting
  - (C) Spray
  - (D) Pulsed
89. What is the name of welding process if the arc produced by a consumable metal electrode is protected by inert gas?
- (A) MAG welding
  - (B) MIG welding
  - (C) TIG welding
  - (D) Plasma welding
90. The other name of CO<sub>2</sub> welding is :
- (A) Metal active gas welding
  - (B) Metal oxygen welding
  - (C) Gas welding
  - (D) Gas arc welding
91. Contact tip of GMAW torch is made by :
- (A) Aluminium
  - (B) Copper
  - (C) Nickel
  - (D) Stainless steel

92. In the GMAW electrode specification ER70 S-6, "S" stands for :
- (A) Steel (B) Strength  
(C) Silicon (D) Solid
93. The rate at which the arc moves along the joints is known as :
- (A) Arc voltage (B) Current  
(C) Background current (D) Arc travel speed
94. What will be increases when you are increasing the wire feed speed in GMAW?
- (A) Arc length (B) Welding current  
(C) Voltage (D) Stick out
95. The drawback of CO<sub>2</sub> shielding in GMAW is :
- (A) More spatters (B) Low spatters  
(C) Low heat (D) None of these
96. Which is used to reduce the cylinder pressure and made to working pressure?
- (A) Gas heater (B) Gas pressure regulator  
(C) Flow meter (D) Welding gas
97. CO<sub>2</sub> is extensively used for welding :
- (A) Stainless steel (B) Copper alloys  
(C) Mild steel (D) Aluminium
98. A suitable gas/gas mixture for GMAW for aluminium is :
- (A) 100% CO<sub>2</sub> (B) 100% Argon  
(C) 80% Argon + 20% CO<sub>2</sub> (D) 98% Argon + 2% oxygen
99. For GMAW the burn off rate of the wire is directly related to :
- (A) Stick out length (B) Wire feed speed  
(C) Arc voltage (D) Travel speed
100. The arc length is most likely to be affected by what during CO<sub>2</sub> welding :
- (A) The wire diameter (B) The current return connection  
(C) The gas flow rate (D) The torch to work angle

**SPACE FOR ROUGH WORK**

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