

PAPER-I
WELDER / WELDER (GMAW & GTAW) WELDER PIPE /
WELDER STRUCTURAL / WELDER (WELDING & INSPECTION / WELDER
(FABRICATION & FITTING)
(THEORY & EMPLOYABILITY SKILLS)
SEMESTER – I

TIME : 3 Hrs.**MARKS: 200**

Note:- This paper contains two parts – Part A & Part B.
Attempt all the questions. All questions carry equal marks.

PART-A (Theory)**(MARKS: 150)****Choose the correct answer:**

1. Which one of the following is not the cost due to an accident?
a) Cost due to damage to machine, tools, material and property
b) Cost of lost time of the injured person
c) Cost of compensation and medical aid
d) Cost due to increase in production
2. The welding machine, which is used to convert AC welding supply to DC welding supply is -
a) Motor generator set
b) Engine generator set
c) Rectifier set
d) Welding transformer
3. In gas cutting, if too little cutting oxygen is supplied -
a) The metal will be cooled down
b) The kerf will be narrow
c) The kerf will be wide
d) The metal will fail to cut completely
4. Neutral flame in gas welding contains -
a) Oxygen & Acetylene in equal proportion
b) More oxygen than Acetylene
c) Less oxygen than Acetylene
d) None of these
5. The chief alloying elements of stainless steel are -
a) Chromium and nickel
b) Chromium and tungsten
c) Nickel and vanadium
d) Nickel and tungsten

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6. The safe way of working is -
a) An effective and right way of working b) An ancient way of working
c) A way of handling the work in a hurry d) A way of normal working
7. In a transformer, if the number of turns in the secondary winding is twice that in the primary winding, the secondary voltage will be -
a) Half that of primary voltage b) Same as the of primary voltage
c) Twice the primary voltage d) Four times the primary voltage
8. Increase of carbon content in steel results in -
a) Increase in hardness b) Increase in malleability
c) Increase in ductility d) Increase in strength
9. In case of arc welding, one should protect his eyes by using -
a) Dark glass screen b) Sun goggles c) Mask d) Clear glasses
10. Which one of the following properties is most essential for the metals in the process of casting, welding, brazing and soldering?
a) Fusibility b) Malleability c) Tenacity d) Plasticity
11. The electrode size refers to -
a) Diameter of its core wire b) Diameter (overall) of electrode
c) Thickness of flux coating d) Length of electrode
12. The size of the cutting nozzle used in oxy-acetylene cutting process depends mainly on -
a) Thickness of metal to be cut b) Purity of oxygen
c) Duration of cut d) Type of cutting blowpipe
13. Cast iron is used for manufacturing machine beds because -
a) It can resist more compressive stress b) It is heavy in weight
c) It is a cheaper metal d) It is a brittle metal
14. In a transformer, the winding to which electric supply is given as input is called
a) Primery winding b) Secondary winding
c) Main winding d) Auxilary winding
15. Which one of the following is the type of transformer used in arc welding?
a) Step down b) Step up
c) One-to-one d) Capable of increasing supply voltage
16. Which is the cause of electric fire?
a) Loose connection b) Over loading the wires
c) Electric short circuit d) All of these

17. Medium solder contains -
a) 37% lead & 63% tin
b) 50% lead & 50% tin
c) 70% lead & 30% tin
d) None of these
18. Aluminum in its pure form is not used for engineering work because -
a) It is brittle
b) It is very light
c) It is costly
d) It lacks strength
19. If there is LPG leakage at home or workshop, what should you do -
a) Donot switch on the lights & fans
b) Donot switch off the lights & fans
c) Open the doors
d) All of these
20. In a gas cut plate, the cut is high quality although there is some surface roughness caused by vertical drag lines. This is due to -
a) Less preheating flame
b) Impure cutting oxygen
c) Too slow cutting speed
d) Smaller size cutting nozzle
21. The correct flame for preheating before cutting is-
a) Oxidizing flame
b) Neutral flame
c) Carburizing flame
d) Slightly carburizing flame
22. One of the functions of electrode coating is -
a) To increase welding current
b) To stabilize the arc
c) To prevent rusting
d) To control arc temperature
23. In a gas cut plate, the cut shows grooves and has deep drag lines. 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
24. The single phase domestic A.C power supply voltage in India is -
a) 110 V
b) 230 V
c) 440V
d) 550 V
25. The size of a welding machine is determined by -
a) Input amperage
b) Output amperage
c) Open circuit voltage
d) Closed circuit voltage
26. The property by which metal can be rolled into sheet is -
a) Elasticity
b) Malleability
c) Ductility
d) Tenacity
27. The correct colours for oxygen and acetylene hoses are -
a) Red for oxygen and blue for acetylene
b) Black for oxygen and red for acetylene
c) Black for oxygen and maroon for acetylene
d) Red for oxygen and maroon for acetylene

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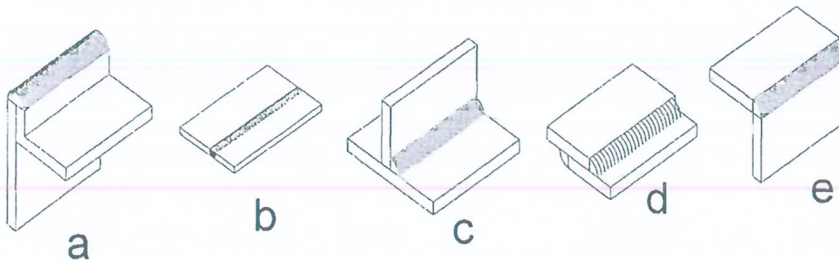


28. If the blowpipe is moved to and fro frequently while cutting the kerf will -
a) Be more b) Of correct size c) Be less d) Not be affected
29. In the process of soldering, you have noticed that solder is not sticking sufficiently heated copper soldering bit when rubbed over solder bar. What step do you take to overcome the problem?
a) Pre- heat the solder b) Clean the bit thoroughly
c) Change the soldering bit shape d) Rub the bit over solder for longer period
30. According to ohms law -
a) $V = I/R$ b) $R = V I$ c) $I = V/R$ d) $I = V R$
31. No current flow in -
a) Closed circuit b) Open circuit c) Short circuit d) Parallel circuit
32. Which one of the following is a chemical property of metal?
a) Corrosiveness b) Conductivity c) Hardness d) Elasticity
33. Which type of fire extinguisher is used in a welding shop?
a) Foam type extinguisher b) Dry powder extinguisher
c) CO₂ extinguisher d) Halon extinguisher
34. The arc utilized in electric arc welding is a -
a) High voltage, high current discharge b) Low voltage, low current discharge
c) Low voltage, high current discharge d) High voltage, low current discharge
35. The position in which it is easiest to weld is -
a) Flat b) Vertical c) Horizontal d) Overhead
36. The ability of a metal to be drawn into wire is a measure of its -
a) Ductility b) Toughness c) Malleability d) Hardness
37. The electrodes are manufactured in two standard lengths namely -
a) 350 mm and 250 mm b) 350 mm and 450 mm
c) 400 mm and 500 mm d) 12" and 10"
38. In an acetylene cylinder, the acetylene is dissolved in -
a) Water b) Carbon Dioxide c) Acetone d) Mercury
39. Which fuel gas is used for cutting deep under water?
a) Acetylene b) Hydrogen c) LPG d) Methane

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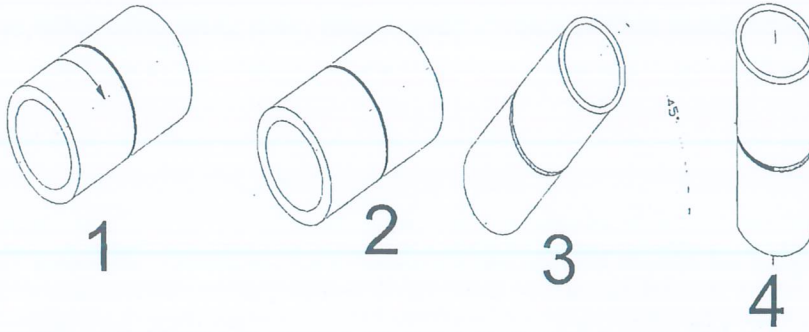
40. Acetylene is a fuel gas for gas cutting & welding composed of -
a) 7.7 of carbon & 92.3 % of hydrogen b) 92.3% carbon & 7.7 % hydrogen
c) 100% carbon d) 50% carbon & 50% hydrogen
41. Match the following tools and their use -
TOOLS :- p. Hand shield, q, chipping hammer r, Tongs s. Try square
USES :- 1. To remove slag 2. To check squareness 3. To hold hot jobs
4 to protect eyes from uv rays
a) p-1, q-2, r-3, s-4 b) p-2. q-1, r-3 s-4
c) p-4, q-1, r- 2 s- 3 d) p-4 q-1 r- 3 s-2
42. What should never be used on gas cylinders, regulators and hoses.
a) Wrenches b) Teflon tapes
c) Leak detectors d) Oil
43. While gas cutting the nozzle should?
a) Almost touch the work b) Be 10 mm away from work
c) Be 2 mm away from work d) Be 5 mm away from work
44. Match the following weld joints by its number -
1. Edge joint 2, Lap joint
3 Corner joint 4. Fillet joint 5. Square butt joint



- a) 1-a. 2-b, 3-c, 4-d, 5-e
b) 1-b. 2-a, 3-c, 4-d, 5-e
c) 1-a. 2-d, 3-e, 4-c, 5-b
d) 1-a. 2-d, 3-c, 4-e, 5-b
45. What purpose is served by flux during soldering?
a) It cleans the surface to be soldered
b) It lowers the melting point of the solder
c) It makes the flow of solder in the joint easy
d) It does all of above
46. A cylinder while contains acetylene will be painted -
a) Brown
b) Black
c) Blue
d) Maroon

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47. Match the following positional welding by its number -
- p. Inclined position q. Vertical position,
r. Horizontal rolled position s. Horizontal fixed position



- a) p-1, q-2, r-3, s-4 b) p-1, q-2, s-3, r-4
c) q-1, p-2, r-3, s-4 d) p-3, q-4, r-1, s-2
48. Match the welding terms with their definitions -
- 1 Parent metal 2 Filler metal 3 Deposited metal with that of its definition
- p. Metal which becomes a part of the joint
q. Metal to be joined r. Metal added during welding
- a) 1-p, 2-q and 3-r b) 1-q, 2-p and 3-r
c) 1-r, 2-q and 3-p d) 1-q, 2-r and 3-p
49. Cast iron contains two elements, which make it difficult to cut it by gas cutting. What are these elements?
- a) Sulphur and phosphorous b) Silicon and graphite
c) Graphite and phosphorous d) Silicon and sulphur
50. In DC welding heat distribution is possible between electrode and the base metal due to the change of polarity. The distribution of heat is -
- a) Positive 2/3 and negative 1 /3 b) Positive 1 /3 and negative 2/3
c) Positive 3/4 and negative 1/4 d) Positive 1/4 and negative 3/4
