

**B**

18/A/C/S-1/2/E

029/212, 268, 269,  
270, 271, 272

**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.**

**This paper carries negative marking. 25% marks will be deducted for each wrong answer.**

**PART-A (Theory)**

**(MARKS: 150)**

**Choose the correct answer:**

1. During arc welding in overhead position, it is more convenient for welder to use .....  
a) Welding goggles    b) Helmet    c) Hand shield    d) Sun glasses
2. 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
3. Which type of gas flame can be conveniently used for gas welding both ferrous and non-ferrous metals?  
a) Air – acetylene flame    b) Oxy – hydrogen flame  
c) Oxy – acetylene flame    d) Oxy – LPG flame
4. A depression formed at the end of the weld is called .....  
a) Pinhole    b) Blowhole    c) Crater    d) Crack
5. Which of the following is the easiest position in welding?  
a) Vertical    b) Overhead  
c) Horizontal – vertical    d) Flat or downhand

*Contd....2*



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6. 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
7. What defect is likely to occur if cast iron is welded without preheating?
- a) Porosity    b) Undercut  
c) Crack    d) Blowholes
8. The angle of torch to the work in rightward welding technique in gas welding is .....
- a)  $30^\circ - 40^\circ$                       b)  $40^\circ - 50^\circ$                       c)  $50^\circ - 60^\circ$                       d)  $60^\circ - 70^\circ$
9. Which type of electrode picks up moisture easily?
- a) Acidic coated electrode                      b) Rutile coated electrode  
c) Basic coated electrode                      d) Titanium coated electrode
10. Acetylene is the product of chemical reaction between calcium carbide and .....
- a) Air    b) Water    c) Kerosene oil                      d) Lubricating oil
11. The choice of flux in gas welding depends upon .....
- a) Type of material to be welded                      b) Thickness of material  
c) Welding position                                      d) Type of fuel gas
12. Gas cylinders are painted in different colours for identification. Oxygen is supplied in cylinders which are painted .....
- a) Red    b) Blue    c) Black    d) Maroon
13. Which of the following is used to remove slag from a welded joint?
- a) Ball peen hammer                                      b) Claw hammer  
c) Chipping hammer                                      d) Sledge hammer
14. What is the position of pipe in 1G?
- a) Flat position – rolling                                      b) Flat position – fixed  
c) Horizontal position                                      d)  $45^\circ$  inclined fixed position

Contd....3

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15. Which fuel gas gives the high flame temperature and is most commonly used in gas welding?  
a) Hydrogen                      b) Acetylene                      c) LPG                      d) Coal gas
16. Soldering iron is made of copper, because .....  
a) It is heavy  
b) Its coefficient of thermal expansion is high  
c) It is good conductor of heat  
d) It is easy to handle
17. What is the size of electrode suitable for 2.5 mm mild steel plate?  
a)  $\text{Ø}$  1.60 mm                      b)  $\text{Ø}$  2.50 mm                      c)  $\text{Ø}$  3.15 mm                      d)  $\text{Ø}$  4.00 mm
18. Heat is the energy transferred between objects because of difference in their .....  
a) Temperature                      b) Mass                      c) Specific heat                      d) Specific gravity
19. A simple device that opens and closes an electrical unit is called .....  
a) Volt                      b) Discharge                      c) Switch                      d) Ampere
20. What gas makes up around 21% of our atmosphere?  
a) Methane                      b) Oxygen                      c) Nitrogen                      d) Carbon dioxide
21. Arc welding in overhead position is considered to be .....  
a) Easiest                      b) Most useful                      c) Most economical                      d) Most hazardous
22. A butt welded joint in carbon steel that is restrained during welding and cooling will .....  
a) Have high residual stress  
b) Be stronger than that which is not restrained  
c) Never crack  
d) None of the above
23. While gas cutting, the preheat oxy-acetylene flame should be .....  
a) Carburizing                      b) Oxidizing                      c) Neutral                      d) Reducing

Contd...4

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24. While doing gas cutting, one should be wearing ..... clothes in the interest of safety.  
a) Leather                      b) Cotton                      c) Woollen                      d) Rayon
25. An acetylene cylinder should never be operated while lying on its side, because .....  
a) It will increase consumption of acetylene  
b) It will slow down the operation  
c) It will cause flow of acetone into the valve and regulator  
d) It will cause accident
26. The width of cut produced by oxy-acetylene cutting is called .....  
a) Kerf                      b) Slag                      c) Bead                      d) Dragline
27. While brazing, well cleaned and fluxed joint, with suitable filler metal and flame, the deposited filler metal sometimes wets only one plate of the joint. In such a situation, how do you overcome the problem?  
a) By changing flame                      b) By heating joint evenly  
c) By increasing speed of brazing                      d) By depositing more filler metal
28. Small welds of short distances are made before welding. This is called as .....  
a) Tagging                      b) Stitching                      c) Bonding                      d) Tacking
29. In case of backfire, D.A. cylinder may catch fire internally. What will you first do in this situation?  
a) Inform the instructor immediately                      b) Cool the cylinder by spraying water  
c) Close the blowpipe acetylene valve first                      d) Close the blowpipe oxygen valve first
30. The most important feature for which riveted joint is used is .....  
a) It is simple, dependable and of low cost                      b) It has high strength  
c) It is hard and durable                      d) None of these
31. What is likely to happen if wrong polarity in D.C. welding is used?  
a) Electrode will become red hot  
b) There will be excess of spatter and poor penetration  
c) Electrode will freeze on the job  
d) Edges of the plate will melt

32. A material placed at the root of a weld to support the molten metal is called .....  
a) Sealing                      b) Backing                      c) Weaving                      d) Facing
33. The tip orifice of a blowpipe should be cleaned by .....  
a) Soft copper wire                      b) Steel wire  
c) Small drill                      d) Tip cleaner
34. Fluxes used for gas welding are available in various forms. Which one of the following is NOT a form of flux?  
a) Coil                      b) Powder                      c) Paste                      d) Liquid
35. What does light, medium and heavy classification of steel pipes depend upon?  
a) Nominal diameter of pipe                      b) Outside diameter of pipe  
c) Inside diameter of pipe                      d) Wall thickness of pipe
36. A metal that reflects light or appears shiny is said to have .....  
a) Lustre                      b) Refraction                      c) Ductility                      d) Malleability
37. .... is the ability of a material to transfer heat and energy.  
a) Ductility                      b) Conductivity                      c) Malleability                      d) Lustre
38. The presence of which one of the following gases in weld metal has the harmful effect of leading to cracking?  
a) Oxygen                      b) Nitrogen                      c) Hydrogen                      d) Argon
39. Which of the following joints has high corrosion resistance?  
a) Welded joint                      b) Riveted joint                      c) Bolted joint                      d) None of these
40. Single – V and single – U arc butt welded joints are used for plates of thickness .....  
a) Upto 10 mm                      b) 5 – 15 mm                      c) 10 – 20 mm                      d) 15 – 25 mm
41. Which of the following types is not fillet weld?  
a) Butt joint                      b) Lap joint                      c) T – Joint                      d) Corner joint

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42. In fusion welding, penetration is the ratio of .....
- a) Width of the weld to its depth
  - b) Length of the weld to its depth
  - c) Depth of the weld to its width
  - d) Depth of the weld to its length
43. If mild steel plate is heavily rusted, what will you do before welding it?
- a) Wash it with soap and water
  - b) Grind it to bring back bare metal
  - c) No need to do anything. Weld it straight way
  - d) Give it a mild cleaning with sandpaper
44. What is the main function of coating provided on coated electrodes?
- a) To insulate the welder from electric shocks
  - b) To clean the weld zone of rust and paint
  - c) To prevent electrodes from damage by water
  - d) To produce protective gas and help produce defect-free weld
45. Before a regulator is attached to a cylinder valve .....
- a) The valve should be "cracked" wide open
  - b) The valve should be opened slightly and immediately closed
  - c) The valve should be oiled
  - d) None of the above
46. SMAW is used in current range between .....
- a) 500 – 3000 ampere
  - b) 50 – 300 ampere
  - c) 10 – 150 ampere
  - d) 1000 – 1500 ampere
47. Which one of the following methods of welding is NOT a method used to control distortion?
- a) Back-step welding
  - b) Skip welding
  - c) Intermittent welding
  - d) Right-hand welding
48. When comparing copper with brass, which one of the following is true about copper?
- a) It is more ductile
  - b) It has higher tensile strength
  - c) It has higher resistance to corrosion
  - d) It is more difficult to weld

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49. Which one of the following metals / alloys has the highest melting point?  
a) Aluminium      b) Bronze      c) Brass      d) Copper
50. Which of the following statement is true?  
a) Copper is a ferrous metal      b) Brass is an alloy  
c) Mild steel is a non-ferrous metal      d) Silver is non-conductor of electricity

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