1. Which of the following solder gives out a toxic gas?

1). Hydrochloric Acid 2). Phosphoric Acid

3). Sal Ammonia 4). None of the above

Ans:1

2. Which of the following is NOT a type of cut in a file?

1). Single cut 2). Double cut 3). Triple cut 4). Rasp cut

Ans:3

Note: Most files also have three grades of cut: First cut or **bastard-cut, second-cut and smooth-cut**. The coarser the cut of the file, the rougher the finish of the work.

3. Columbium based stainless steel electrode is used for welding stainless steel joints. This will prevent...

1). Crack in the joint 2).Weld decay

3). Distortion 4). Spatter

Ans: 2

4. Where is "Arjuna's Penance', an open rock sculpture found?

1). Tanjore 2). Mamallapuram

3). Madurai 4). Kanniyakumari

Ans: 2

5. The current and the applied e.m.f. are in phase in an AC circuit which

1). Inductance only. 2). Resistance only.

3). Capacitance only. 4). All thethree.

Ans: 2

6. The sides of a triangle are 5 cm, 12 cm and 13 cm. Its area in cm^2 is -

1). 24 2). 26 3). 30 4). 15

Ans: 3

7. The type of flame to be set for welding brass is...

1). air acetylene flame 2). Neutral flame

3). Oxidizing flame 4). Carburizing flame

Ans: 1

8. The time taken by a particle for one complete oscillation is known as –

1). Beat 2). Frequency 3). Periodic time 4). Amplitude

Ans: 3

9. Name the defect, in which the weld metal is flowing on to the surface of the base metal without fusing

1). Crater
2). Overlap
3).Lack of fusion
4). Excessive convexity
Ans: 3

10. Which one of the following is the best method used for welding stainless steel sheet?
1). shielded metal arc welding
2), tungsten inert gas welding
3). oxy-acetylene gas welding
4). Submerged arc welding
Ans: 2

11. Acetylene gas made of
1). Calcium, carbon and hydrogen
2). Calcium and hydrogen
3). Calcium, carbon, hydrogen and oxygen
4). carbon and hydrogen
Ans: 4 (C_2H_2)

12. One of the advantages of the submerged arc welding process is...
1). high deposition rate and speed
2). the joint will be totally defect free
3). thin sheets can also be welded
4). welding of non-ferrous metals can
Ans: 1(Thick plates can be welded and arc is not visible)

13. The dense mass of small water drops on smoke or dust particles in the lower layers of the atmosphere is called?

1). Dew
2). Fog
3). Frost
4). Hail
Ans: 2

14. Nautical mile is a unit of distance in

1) navigation.
2) space.
3) Aviation/navigation.
4) None of these.
Ans: 3

15. Basic solution is one which has pH value

1). Greater than 7
2). Less than 7
3). Equal to 7
4). None of the above

Ans: 1 (pH means hydrogen ion concentration)

16. The unit of measuring food energy is
1). Volts
2). Ergs
3). Horse Power
4). Calories
Ans: 4

17. The substance that causes the air pollution is
1). smoke
2). Sulphur dioxide
3). carbon monoxide
4). Carbon dioxide

Ans: 2

Air Pollutants

Carbon Monoxide. CO
Lead, Pb
Nitrogen Oxides, NOx
Trophospheric Ozone, O_3
Particulate Matter. PM
Sulfur Dioxide, SO_2
Other Air Pollutants.

https://www.cdc.gov/air/pollutants.htm

18. The source of energy for satellites is
1). Battery 2). Solar cells
3). Cryogenic storage 4). Any of the above
Ans: 2

19. Which of the following is NOT a joining process?
1). Welding 2). Brazing 3). Galvanizing 4). Adhesion Bonding
Ans: 3

20. Which one of the following metals will not permit X-rays to pass through?
1). stainless steel 2). Aluminum 3) Lead 4). Tin
Ans: 3

21. Punches used for marking purposes are made of
1). Cast iron 2). Mild steel 3). Stainless steel 4) High carbon steel
Ans: 4

22. Which of the following is NOT a characteristic of ceramics?
1). Non metallic 2). Good insulating property
3). Brittle 4) Toughness
Ans: 4

23. The unit of power is
1). Joule per second only 2). Joule only
3), Joule per second and Watt 4). Watt only
Ans: 3

24. The source of solar energy is
1) Nuclear fusion reactions 2). Nuclear fission reactions

3). radioactive decay 4). Burning of gases present in the sun
Ans: 1

25. In plasma and TIG welding, the arc is struck between –
1) A non-consumable electrode and the metal to be welded
2). A consumable electrode and the base metal
3). Two tungsten electrodes
4). None
Ans: 1

26. Which of the following should NOT be used to move an electric shock victim away from spot?
1). Rubber gloves 2). Wooden stick 3).iron rod 4). Dry cloth
Ans: 3

27. Which is the oldest locomotive of the world to run on a rail route?
1). Fairy Queen 2). Princess 3). Nilgris Queen 4). Siberian Queen
Ans: 1

28. Outer Surface of a glass containing ice water becomes wet because –
1). ice water permeates through glass
2).The air near the glass is cooled and moisture is condensed
3). insects bring water from nearby ponds to cool places
4) None
Ans: 2

29. 'Seismograph' is used to record –
1). Earthquake 2). Heart beats
3). The Spread of military aircraft 4). Brain waves
Ans: 1

30. The ratio of the two areas of two squares, one having its diagonal and side double than the other is -
1). 2:3 2). 2:1 3). 1:2 4).4.1

Ans: 3

Note: Area A: in terms of side, a : $A = a^2$; diagonal $d = a\sqrt{2}$ and area of square with diagonal as its side $=2\ a^2$

∴ Area of sq. with side d (diagonal as side) : Area of sq. with side 2a = $(a\sqrt{2})^2 : (2a)^2 : 2a^2 : 4a^2 = 1: 2$

31. Sound is a form of
1). Energy 2). Matter
3). Radiation 4). Electromagnetic energy

Ans: 1(sound is longitudinal waves; light is transverse waves. Light is also energy)

32. Solid carbon dioxide is also called as
1) Dry Ice 2). Laughing Gas 3). Oleum 4). Water vapour

Ans: 1

33. In a p-type semiconductor_____ are majority carriers.
1). Electrons 2). Holes 3). Atoms 4). None of these
Ans: 2

33.1 In a n-type semiconductor_____ are majority carriers.
1). Electrons 2). Holes 3). Atoms 4). None of these
Ans: 1

34. 1 Kilowatt hour is the same as –
1). 100Joule 2). 1000 Joule 3). 1000 watt.sec 4). 360000 watt.sec

Ans: 4 (1 KW.hr = one unit of electrical energy; 1 J = 1 W.s)

kilowatt-hour (1 kWh) is equivalent to a power of 1 kW being used for 1 hour
1 k W h = l kilowatt × 1 hour = 1000 watt × 3600 second = **3,600,000 watt-second or Joule**
= $3.6x10^6$ = 3600 KJ = 3.6 MJ

35. The unit of charge is called a –
1). Ampere 2). Coulomb 3). Joule 4). Tesla
Ans: 2

36. Which one of the following metal has the highest melting temperature?
1). Copper 2). Tungsten 3). Aluminum 4). Mild steel

Ans: 2 (Melting point is 3410°C)

37. Welders use the chipping hammer to-
1). Shape the metals before welding
2). tighten the regulators
3). remove the slag from weld bead
4). None
Ans: 3

38. Which of the following factors is to be considered while choosing a TIG welding torch?
1). the inert gas used for welding

2). the current carrying capacity

3). the material used for the torch body

4). the type of current used for welding

Ans:2

When selecting a TIG torch, first consider the current it must handle. As ever, that's determined by the parent metal and its thickness. More amps demand bigger TIG torches. As a guide, at 30A/mm, 3mm mild steel requires 90A. Similarly, think 35A/mm for aluminium. A greater thickness of a given metal means more amperes and bigger TIG torches.

39. The size of an electrode holder is specified by its

1). weight
2). shape
3). current carrying capacity
4). None

Ans:3

40. A prick punch is used to -

1). Locating holes
2). Making light punch marks
3). Marking small dots
4). None of these

Ans:

41. At what temperature a moisture affected (wet) electrode is to be heated for one hour?

1). 50 to 100°C
2). 110 to 150°C
3). 160 to 200°C
4). 200 to 250°C

Ans:4

When the cans are opened, electrodes that will not be immediately used should be placed in a cabinet at 120 to 150 ^{O}C (250^{O} to 300 ^{O}).

42. The percentage of thorium present in throated tungsten electrode used in TIG welding is...

1). 0.5 to 1%
2). 1 to 2.0%
3). 2.5% to 3%
4). 3 to 3.5%

Ans:2

43. The purpose of fitting a hose protector is to...

1). permit the gas to flow from blow pipe to the cylinder

2). avoid the return flow of gas into the cylinder

3). permit the gas flow both ways

4). None

Ans:4

The hose guards and hose sleeves eliminate the damage caused by extreme heat and water abrasion. They have the ability to extend the lifespan of the hose assembly and also provide protection to workers from slippage, spillage or hose movement.

https://ph.parker.com/in/en/hose-guards-hose-sleeves#:~:text=Parker%20hose%20guards%20and%20hose,slippage%2C%20spillage%20or%20hose%20movement.

44. Which of the following is used to scribe an arc with a large radius?

1). Wing compass 2). Fixed joint 3). Trammel 4). Spring joint compass

Ans:3

45. What is the point angle for flat chisels for cutting mild steel?

1). 30° 2). 45° 3). 60° 4). 55°

Ans:4

46. Which one of the following metal plates cannot be joined by projection welding process?

1). Tin plates 2). Copper plates

3). Mild steel plates 4), Stainless steel plates

Ans:2

47. Which flux is used in soldering tin sheets?

1). HCl 2). Zinc Chloride 3). Sal Ammonia 4). Phosphoric Acid

Ans:2

2. Non-corrosive flux:-

Non-corrosive flux does not contain alkali and acid at all. If such fluxes remain on the surface of the metal for a long time, then there is no harm like turpentine oil, icing, etc.

Different Types of Corrosive Flux

Different types of Corrosive Flux are as follows

1. Hydrochloric Acid:

Hydrochloric acid is in liquid form and gives smoke when exposed to air. Use it by mixing it in water. G. I. Hydrochloride is used for (galvanized) sheets. When it is used on zinc, due to chemical reaction it becomes zinc chloride.

2 . Zinc Chloride:

It is used for soldering brass sheets, copper sheets, tin sheets, etc. Fluxes should be spotless with water after soldering. It is also used in the soldering of mild steel.

3. Ammonium Chloride:

This salt is also called Salt Ammonia. It is used in the soldering of copper and steel parts. this is used as an electrolyte in dry batteries, and used as a fluid in soldering, on heating it flies off as steam. A mixture of hydrochloride, ammonium chloride, and zinc chloride is used in the soldering of stainless steel sheet

https://www.rajmcqs.in/flux-for-soldering/

48. Soft solder is an alloy of -

1). Lead and Tin
2). Tin and Copper
3). Lead and copper
4). Lead and Iron

Ans:1

Soft solder typically has a melting point range of 90 to 450 °C (190 to 840 °F; 360 to 720 K), and is commonly used in electronics, plumbing, and sheet metal work. Alloys that melt between 180 and 190 °C (360 and 370 °F; 450 and 460 K) are the most commonly used. Soldering performed using alloys with a melting point above 450 °C (840 °F; 720 K) is called brazing or "hard soldering".

https://en.wikipedia.org/wiki/Solder