Chemistry

1.

Brass gets discoloured in air because of the presence of which of the following gases in air?

A. Oxygen

B. Hydrogen sulphide

C. Carbon dioxide

D. Nitrogen

2.

Which of the following is a non metal that remains liquid at room temperature?

A. Phosphorous

B. Bromine

C. Chlorine

D. Helium

3.

Chlorophyll is a naturally occurring chelate compound in which central metal is

A. copper

B. magnesium

C. iron

D. calcium

4.

Which of the following is used in pencils?

A. Graphite

B. Silicon

C. Charcoal

D. Phosphorous

5.

Which of the following metals forms an amalgam with other metals?

A. Tin

B. Mercury

C. Lead

D. Zinc

6.

Chemical formula for water is

A. NaAlO2

B. H2O

C. Al2O3

D. CaSiO3

7.

The gas usually filled in the electric bulb is

A. nitrogen

B. hydrogen

C. carbon dioxide

D. oxygen

8.

Washing soda is the common name for

A. Sodium carbonate

B. Calcium bicarbonate

C. Sodium bicarbonate

D. Calcium carbonate

9.

Quartz crystals normally used in quartz clocks etc. is chemically

A. silicon dioxide

B. germanium oxide

C. a mixture of germanium oxide and silicon dioxide

D. sodium silicate

10.

Which of the gas is not known as green house gas?

A. Methane

B. Nitrous oxide

C. Carbon dioxide

D. Hydrogen

11.

Bromine is a

A. black solid

B. red liquid

C. colourless gas

D. highly inflammable gas

12.

The hardest substance available on earth is

A. Gold

B. Iron

C. Diamond

D. Platinum

13.

The variety of coal in which the deposit contains recognisable traces of the original plant material is

A. bitumen

B. anthracite

C. lignite

D. peat

14.

Tetraethyl lead is used as

A. pain killer

B. fire extinguisher

C. mosquito repellent

D. petrol additive

15.

Which of the following is used as a lubricant?

A. Graphite

B. Silica

C. Iron Oxide

D. Diamond

16.

The inert gas which is substituted for nitrogen in the air used by deep sea divers for breathing, is

A. Argon

B. Xenon

C. Helium

D. Krypton

17.

The gases used in different types of welding would include

A. oxygen and hydrogen

B. oxygen, hydrogen, acetylene and nitrogen

C. oxygen, acetylene and argon

D. oxygen and acetylene

18.

The property of a substance to absorb moisture from the air on exposure is called

A. osmosis

B. deliquescence

C. efflorescence

D. desiccation

19.

In which of the following activities silicon carbide is used?

A. Making cement and glass

B. Disinfecting water of ponds

C. cutting very hard substances

D. Making casts for statues

20.

The average salinity of sea water is

A. 3%

B. 3.5%

C. 2.5%

D. 2%

21.

When an iron nail gets rusted, iron oxide is formed

A. without any change in the weight of the nail

B. with decrease in the weight of the nail

C. with increase in the weight of the nail

D. without any change in colour or weight of the nail

22.

Galvanised iron sheets have a coating of

A. lead

B. chromium

C. zinc

D. tin

23.

Among the various allotropes of carbon,

A. coke is the hardest, graphite is the softest

B. diamond is the hardest, coke is the softest

C. diamond is the hardest, graphite is the softest

D. diamond is the hardest, lamp black is the softest

24.

The group of metals Fe, Co, Ni may best called as

A. transition metals

B. main group metals

C. alkali metals

D. rare metals

25.

Heavy water is

A. deuterium oxide

B. PH7

C. rain water

D. tritium oxide

26.

The chemical (ethyl mercaptan) added to the otherwise odourless LPG cooking gas for imparting a detectable smell to the gas is a compound of

A. bromine

B. fluorine

C. chlorine

D. sulphur

27.

The element common to all acids is

A. hydrogen

B. carbon

C. sulphur

D. oxygen

28.

Non stick cooking utensils are coated with

A. Teflon

B. PVC

C. black paint

D. polystyrene

29.

Monazite is an ore of

A. titanium

B. zirconium

C. iron

D. thorium

30.

Carbon, diamond and graphite are together called

A. allotropes

B. isomers

C. isomorphs

D. isotopes

31.

Potassium nitrate is used in

A. medicine

B. fertiliser

C. salt

D. glass

32.

Permanent hardness of water may be removed by the addition of

A. sodium carbonate

B. alum

C. potassium permanganate

D. lime

33.

Soda water contains

A. carbonic acid

B. sulphuric acid

C. carbon dioxide

D. nitrous acid

34.

The most important ore of aluminium is

A. galena

B. calamine

C. calcite

D. bauxite

35.

Most soluble in water is

A. camphor

B. sulphur

C. common salt

D. sugar

36.

Which of the following was to be discovered first in the chromospheres of the sun?

A. Krypton

B. Xenon

C. Neon

D. Helium

37.

Which of the following is in liquid form at room temperature?

A. Lithium

B. Sodium

C. Francium

D. Cerium

38.

Sodium metal is kept under

A. petrol

B. alcohol

C. water

D. kerosene

39.

Which of the following are the ingredients of gun metal?

A. Iron, Zinc, Titanium

B. Iron, tin

C. Iron, Brass, Tin

D. Copper, Tin

40.

From which mineral is radium obtained?

A. Rutile

B. Haematite

C. Limestone

D. Pitchblende

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| 1. | The nucleus of an atom consists of |
| |  |  | | --- | --- | | **A.** | electrons and neutrons | | **B.** | electrons and protons | | **C.** | protons and neutrons | | **D.** | All of the above |   **Answer:** Option **C** |

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| 2. | The number of moles of solute present in 1 kg of a solvent is called its |
| |  |  | | --- | --- | | **A.** | molality | | **B.** | molarity | | **C.** | normality | | **D.** | formality |   **Answer:** Option **A** |

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| 3. | The most electronegative element among the following is |
| |  |  | | --- | --- | | **A.** | sodium | | **B.** | bromine | | **C.** | fluorine | | **D.** | oxygen |   **Answer:** Option **C** |

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| 4. | The metal used to recover copper from a solution of copper sulphate is |
| |  |  | | --- | --- | | **A.** | Na | | **B.** | Ag | | **C.** | Hg | | **D.** | Fe |   **Answer:** Option **D** |

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| 5. | The number of d-electrons in Fe2+ (Z = 26) is not equal to that of |
| |  |  | | --- | --- | | **A.** | *p*-electrons in Ne(Z = 10) | | **B.** | *s*-electrons in Mg(Z = 12) | | **C.** | *d*-electrons in Fe(Z = 26) | | **D.** | *p*-electrons in CI(Z = 17) |   **Answer:** Option **D** |

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| 6. | The metallurgical process in which a metal is obtained in a fused state is called |
| |  |  | | --- | --- | | **A.** | smelting | | **B.** | roasting | | **C.** | calcinations | | **D.** | froth floatation |   **Answer:** Option **A** |

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| 7. | The molecules of which gas have highest speed? |
| |  |  | | --- | --- | | **A.** | H2 at -73oC | | **B.** | CH4 at 300 K | | **C.** | N2 at 1,027oC | | **D.** | O2 at 0oC |   **Answer:** Option **A** |

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| 8. | The oldest rocks in the earth's crust were once molten, and came from deep inside the earth. The molten rock, called magma, spewed out in volcanic eruptions during the earth;s early life and solidified into hard rock's called |
| |  |  | | --- | --- | | **A.** | granite | | **B.** | basalt | | **C.** | igneous rocks | | **D.** | sedimentary rocks |   **Answer:** Option **C** |

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| 9. | The law which states that the amount of gas dissolved in a liquid is proportional to its partial pressure is |
| |  |  | | --- | --- | | **A.** | Dalton's law | | **B.** | Gay Lussac's law | | **C.** | Henry's law | | **D.** | Raoult's law |   **Answer:** Option **C** |

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| 10. | The main buffer system of the human blood is |
| |  |  | | --- | --- | | **A.** | H2CO3 - HCO3 | | **B.** | H2CO3 - CO32- | | **C.** | CH3COOH - CH3COO- | | **D.** | NH2CONH2 - NH2CONH+ |   **Answer:** Option **A** |

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| 11. | The gas present in the stratosphere which filters out some of the sun's ultraviolet light and provides an effective shield against radiation damage to living things is |
| |  |  | | --- | --- | | **A.** | helium | | **B.** | ozone | | **C.** | oxygen | | **D.** | methane |   **Answer:** Option **B** |

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| 12. | The most commonly used bleaching agent is |
| |  |  | | --- | --- | | **A.** | alcohol | | **B.** | carbon dioxide | | **C.** | chlorine | | **D.** | sodium chlorine |   **Answer:** Option **C** |

13.

The nucleus of a hydrogen atom consists of

A. 1 proton only

B. 1 proton + 2 neutron

C. 1 neutron only

D. 1 electron only

Answer: Option A

14.

The heat required to raise the temperature of body by 1 K is called

A. specific heat

B. thermal capacity

C. water equivalent

D. None of the above

Answer: Option B

15.

The nuclear particles which are assumed to hold the nucleons together are

A. electrons

B. positrons

C. neutrons

D. mesons

Answer: Option D

16.

The mass of P4O10 that will be obtained from the reaction of 1.33 gram of P4 and 5.07 of oxygen is

A. 2.05 gram

B. 3.05 gram

C. 4.05 gram

D. 5.05 gram

Answer: Option B

17.

The octane number of zero is assigned to

A. 2-methyl octane

B. n-heptane

C. iso-octane

D. 3-methyl octane

Answer: Option B

18.

The metal that is used as a catalyst in the hydrogenation of oils is

A. Ni

B. Pb

C. Cu

D. Pt

Answer: Option A

19.

The most abundant rare gas in the atmosphere is

A. He

B. Ne

C. Ar

D. Xe

Answer: Option C

20.

The Latin word formica means ant. The name formic acid is derived from this Latin word because

A. this acid, in ancient times, was used to eliminate ant-hills

B. this corrosive acid is secreted by ants to drive away their enemies

C. this acid was first obtained by the distillation of ants

D. ants are attracted by the odour of this acid

Answer: Option C

21.

The ore which is found in abundance in India is

A. monazite

B. fluorspar

C. bauxite

D. magnetite

Answer: Option A

22.

The inherited traits of an organism are controlled by

A. RNA molecules

B. nucleotides

C. DNA molecules

D. enzymes

Answer: Option C

23.

The heat energy produced when the human body metabolises 1 gram of fat is

A. 30 KJ

B. 1 KJ

C. 39 KJ

D. 29 KJ

Answer: Option C

24.

What are the number of moles of CO2 which contains 16 g of oxygen?

A. 0.5 mole

B. 0.2 mole

C. 0.4 mole

D. 0.25 mole

Answer: Option A

25.

The main use of salt in the diet is to

A. make the taste of food better

B. produce in small amounts the hydrochloric acid required for the digestion of food

C. ease the process of cooking

D. increase the solubility of food particles in water

Answer: Option B

26.

The monomer of polythene is

A. vinyl chloride

B. ethylene

C. ethyl alcohol

D. None of the above

Answer: Option B

27.

The luster of a metal is due to

A. its high density

B. its high polishing

C. its chemical inertness

D. presence of free electrons

Answer: Option D

28.

The number of water molecules present in a drop of water (volume 0.0018 ml) at room temperature is

A. 1.568 x 103

B. 6.023 x 1019

C. 4.84 x 1017

D. 6.023 x 1023

Answer: Option B

29.

The most malleable metal is

A. platinum

B. silver

C. iron

D. gold

Answer: Option D

30.

The oil used in the froth floatation process is

A. coconut oil

B. olive oil

C. kerosene oil

D. pine oil

Answer: Option D