

Material Science

Question No. 01

For safety, the fuse wire used in the mains for household supply of electricity must be made of metal having

- (A) Low melting point
- (B) High resistance
- (C) High melting point
- (D) Low specific heat

Answer: Option A

Question No. 02

For galvanizing iron which of the following metals is used?

- (A) Aluminium
- (B) Copper
- (C) Lead
- (D) Zinc

Answer: Option D

Question No. 03

The element of an electric stove made

- (A) Copper
- (B) Invar
- (C) Magnalium
- (D) Nicrome

Answer: Option D

Question No. 04

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

- (A) Copper
- (B) Magnesium
- (C) Iron
- (D) Calcium

Answer: Option B

Question No. 05

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

Answer: Option A

Question No. 06

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

Answer: Option D

Question No. 07

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

Answer: Option D

Question No. 08

The average salinity of sea water is

- (A) 3 %
- (B) 3.5 %
- (C) 2.5 %
- (D) 2 %

Answer: Option B

Question No. 09

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

- (A) Transition metals
- (B) Main group metals
- (C) Alkali metals
- (D) Rare metals

Answer: Option A

Question No. 10

Non-stick cooking utensils are coated with

- (A) Teflon
- (B) PVC
- (C) Black paint
- (D) Polystyrene

Answer: Option A

Question No. 11

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

- (A) Krypton
- (B) Xenon

- (C) Neon
- (D) Helium

Answer: Option D

Question No. 12

Which of the following are the ingredients of gun metal?

- (A) Iron, Zinc, Titanium
- (B) Iron, tin
- (C) Iron, Brass, Tin
- (D) Copper, Tin

Answer: Option D

Question No. 13

Actinides are the elements with atomic numbers from

- (A) 97 to 104
- (B) 101 to 115
- (C) 89 to 103
- (D) 36 from 43

Answer: Option C

Question No. 14

In fireworks, the green flame is produced because of

- (A) Sodium
- (B) Barium
- (C) Mercury
- (D) Potassium

Answer: Option B

Question No. 15

Which metal pollute the air of a big city?

- (A) Copper
- (B) Chromium
- (C) Lead
- (D) Cadmium

Answer: Option C

Question No. 16

The most important ore of aluminium is

- (A) Galena
- (B) Calamine
- (C) Calcite
- (D) Bauxite

Answer: Option D

Question No. 17

From which mineral is radium obtained?

- (A) Rutile
- (B) Haematite
- (C) Limestone
- (D) Pitchblende

Answer: Option D

Question No. 18

Which of the following does not contain a coinage metal?

- (A) Silver and Gold
- (B) Zinc and Gold
- (C) Copper and Silver
- (D) Copper and Gold

Answer: Option B

Question No. 19

Amalgams are

- (A) Highly coloured alloys
- (B) Alloys which contain mercury as one of the contents
- (C) Alloys which have great resistance to abrasion
- (D) Alloys which contain carbon

Answer: Option B

Question No. 20

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

Answer: Option B

Question No. 21

Which of the following is used in pencils?

- (A) Graphite
- (B) Silicon
- (C) Charcoal
- (D) Phosphorous

Answer: Option A

Question No. 22

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

- (A) Lithium
- (B) Sodium
- (C) Francium

(D) Cerium

Answer: Option C

Question No. 23

The filament of an electric bulb is made of

(A) Tungsten

(B) Nichrome

(C) Graphite

(D) Iron

Answer: Option A

Question No. 24

Which of the following metals remain in liquid for under normal conditions?

(A) Radium

(B) Zinc

(C) Uranium

(D) Mercury

Answer: Option D

Question No. 25

Chemical formula for water is

(A) NaAlO_2

(B) H_2O

(C) Al_2O_3

(D) CaSiO_3

Answer: Option B

Question No. 26

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

Answer: Option C

Question No. 27

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

Answer: Option C

Question No. 28

Carbon, diamond and graphite are together called

- (A) Allotropes
- (B) Isomers
- (C) Isomorphs
- (D) Isotopes

Answer: Option A

Question No. 29

Sodium metal is kept under

- (A) Petrol
- (B) Alcohol
- (C) Water
- (D) Kerosene

Answer: Option D

Question No. 30

The two elements that are frequently used for making transistors are

- (A) Boron and aluminium
- (B) Silicon and germanium
- (C) Iridium and tungsten
- (D) Niobium and columbium

Answer: Option B

Question No. 31

Diamond is an allotropic form of

- (A) Germanium
- (B) Carbon
- (C) Silicon
- (D) Sulphur

Answer: Option B

Question No. 32

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

- (A) Phosphorous
- (B) Bromine
- (C) Chlorine
- (D) Helium

Answer: Option B

Question No. 33

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

- (A) Tin
- (B) Mercury
- (C) Lead
- (D) Zinc

Answer: Option B

Question No. 34

The gas usually filled in the electric bulb is

- (A) Nitrogen
- (B) Hydrogen
- (C) Carbon dioxide
- (D) Oxygen

Answer: Option A

Question No. 35

The hardest substance available on earth is

- (A) Gold
- (B) Iron
- (C) Diamond
- (D) Platinum

Answer: Option C

Question No. 36

Which of the following is used as a lubricant?

- (A) Graphite
- (B) Silica
- (C) Iron Oxide
- (D) Diamond

Answer: Option A

Question No. 37

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

Answer: Option C

Question No. 38

Galvanised iron sheets have a coating of

- (A) Lead
- (B) Chromium
- (C) Zinc
- (D) Tin

Answer: Option C

Question No. 39

The element common to all acids is

- (A) Hydrogen
- (B) Carbon
- (C) Sulphur

(D) Oxygen

Answer: Option A

Question No. 40

Monazite is an ore of

(A) Titanium

(B) Zirconium

(C) Iron

(D) Thorium

Answer: Option D

Question No. 41

Production of chlorofluorocarbons (CFC) gas which is proposed to be banned in India, is used in which of the following domestic products?

(A) Television

(B) Refrigerator

(C) Tube light

(D) Cooking gas

Answer: Option B

Question No. 42

Bell metal is an alloy of

(A) Nickel and copper

(B) Zinc and copper

(C) Brass and nickel

(D) Tin and copper

Answer: Option D

Question No. 43

The main constituents of pearls are

(A) Calcium oxide and ammonium chloride

(B) Calcium carbonate and magnesium carbonate

(C) Aragonite and conchiolin

(D) Ammonium sulphate and sodium carbonate

Answer: Option B

Question No. 44

Which of the following is the lightest metal?

(A) Mercury

(B) Lithium

(C) Lead

(D) Silver

Answer: Option B

Question No. 45

Which of the following is an element?

- (A) Ruby
- (B) Sapphire
- (C) Emerald
- (D) Diamond

Answer: Option D

Question No. 46

Gypsum is added to cement clinker to

- (A) Increase the tensile strength of cement
- (B) Decrease the rate of setting of cement
- (C) Facilitate the formation of colloidal gel
- (D) Bind the particles of calcium silicate

Answer: Option B

Question No. 47

Which one of the following is the petroleum wax?

- (A) Paraffin wax
- (B) Jonoba wax
- (C) Carnauba wax
- (D) Bees wax

Answer: Option A

Question No. 48

Which is/are the important raw material(s) required in cement industry?

- (A) Gypsum and Clay
- (B) Clay
- (C) Limestone and Clay
- (D) Limestone

Answer: Option C

Question No. 49

Which of the following is commonly called a 'polyamide'?

- (A) Terylene
- (B) Nylon
- (C) Rayon
- (D) Orlon

Answer: Option B

Question No. 50

Epoxy resins are used as

- (A) Detergents
- (B) Insecticides
- (C) Adhesives

(D) Moth repellents

Answer: Option C

Question No. 51

Wood is the main raw material for the manufacture of

(A) Paint

(B) Paper

(C) Ink

(D) Gun powder

Answer: Option B

Question No. 52

Which of the following is used for removing air bubbles from glass during its manufacture?

(A) Arsenous oxide

(B) Potassium carbonate

(C) Soda ash

(D) Feldspar

Answer: Option A

Question No. 53

Optic fibres are mainly used for which of the following?

(A) Musical instruments

(B) Food industry

(C) Weaving

(D) Communication

Answer: Option D

Question No. 54

In vulcanisation, natural rubber is heated with

(A) Carbon

(B) Silicon

(C) Sulphur

(D) Phosphorous

Answer: Option C

Question No. 55

Paper is manufactured by

(A) Wood and resin

(B) Wood, sodium and bleaching powder

(C) Wood, calcium, hydrogen sulphite and resin

(D) Wood and bleaching powder

Answer: Option C

Question No. 56

Which type of fire extinguisher is used for petroleum fire?

- (A) Powder type
- (B) Liquid type
- (C) Soda acid type
- (D) Foam type

Answer: Option A

Question No. 57

Which of the following is a protein?

- (A) Natural rubber
- (B) Starch
- (C) Cellulose
- (D) None of these

Answer: Option A

Question No. 58

How does common salt help in separating soap from the solution after saponification?

- (A) By decreasing density of Soap
- (B) By decreasing solubility of Soap
- (C) By increasing density of Soap
- (D) By increasing solubility of Soap

Answer: Option B

Question No. 59

Glass is made of the mixture of

- (A) Quartz and mica
- (B) Sand and silicates
- (C) Salt and quartz
- (D) Sand and salt

Answer: Option B

Question No. 60

The type of glass used in making lenses and prisms is

- (A) Jena glass
- (B) Soft glass
- (C) Pyrex glass
- (D) Flint glass

Answer: Option D

Question No. 61

Deep blue colour is imparted to glass by the presence of

- (A) Cupric oxide
- (B) Nickel oxide
- (C) Cobalt oxide
- (D) Iron oxide

Answer: Option C

Question No. 62

The major ingredient of leather is

- (A) Collagen
- (B) Carbohydrate
- (C) Polymer
- (D) Nucleic acid

Answer: Option A

Question No. 63

What are the soaps?

- (A) Salts of silicates
- (B) Mixture of glycerol and alcohols
- (C) Sodium or potassium salts of heavier fatty acids
- (D) Esters of heavy fatty acids

Answer: Option C

Question No. 64

The vast resources of unutilised natural gas can be used in the production of

- (A) Graphite
- (B) Synthetic petroleum
- (C) Fertilisers
- (D) Carbide

Answer: Option C

Question No. 65

Rayon is chemically

- (A) Cellulose
- (B) Pectin
- (C) Glucose
- (D) Amylase

Answer: Option A

Question No. 66

Soap is a mixture of sodium or potassium salts of

- (A) Dicarboxylic acids
- (B) Monocarboxylic acids
- (C) Glycerol
- (D) Tricarboxylic acids

Answer: Option B