1. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Morphine	1. Antiseptic
B. Sodium	2. Alloy
C. Boric acid	3. Analgesic
D. German silver	4. Kerosene oil

(a) 4 3 1 2 (b) 2 4 3 1
(c) 3 1 4 2 (d) 3 4 1 2 2

2. Match List-I with List-II and select the correct answer given below :

List-I	List-II
A. Electron	1. Rutherford
B. Proton	2. J.J. Thomson
C. Neutron	3. Chadwick
D. Positron	4. Anderson

(a) 2 1 3 4 (b) 4 3 1 2
(c) 2 1 4 3 (d) 4 3 2 1

3. Consider the following parts of spectra:
1. Visible 2. Infrared 3. Ultraviolet 4.

Microwave Which of the following is the correct sequence in which the wavelengths increase?

(a) 4, 3, 1, 2 (b) 4, 1, 2, 3

(c) 3, 2, 1, 4 (d) 3, 1, 2, 4

4. Consider the following parts of spectra:
1. Visible 2. Infrared 3. Ultraviolet 4. Microwave
Which of the following is the correct sequence in which the wavelengths increase?
(a) 4, 3, 1, 2 (b) 4, 1, 2, 3
(c) 3, 2, 1, 4 (d) 3, 1, 2, 4

5. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Moderator	1. Uranium
B. Control rod	2. Graphite
C. Fuel rods	3. Boron
D. Coolant	4. Lead Sodium

(a) 2 1 3 5 (b) 2 3 1 5
(c) 3 2 1 5 (d) 3 4 1 2

6. The difference between a nuclear reactor and atomic bomb is that
(a) no chain reaction takes place in nuclear reactor while in the atomic bomb there is a chain reaction.
(b) the chain reaction in nuclear reactor is controlled.
(c) the chain reaction in nuclear reactor is not controlled.
(d) no chain reaction takes place in atomic bomb while it takes place in nuclear reactor

7. Match List-I with List-II and select the correct answer from the codes given below

List-I	List-II
A. Zero mass	1. Positron
B. Fractional charge	2. Neutrino
C. Fractional spin	3. Quark
D. Integral spin	4. Photon

(a) 4 3 1 2 (b) 3 2 4 1
(c) 2 3 4 1 (d) 3 2 1 4

8. H2O is liquid and H2S is a gas because
(a) oxygen forms stronger hydrogen level than sulphur.
(b)oxygen is less electronegative than sulphur.
(c) atomic radius of oxygen is less than that of sulphur.
(d) atomic radius of oxygen is greater than that of sulphur.

9. Consider the following statements and select the correct code. Assertion (A): A chemical reaction becomes faster at higher temperature. Reason (R): At higher temperature, molecular motion becomes more rapid
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true, but R is not correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

10. The order of appearance of the following with increasing temperature during the refining of crude oil is _____
(a) Kerosene, gasoline, diesel
(b) Diesel, gasoline, kerosene
(c) Gasoline, kerosene, diesel
(d) Gasoline, diesel, kerosene

11. Consider the following statements: If there were no phenomenon of capillarity
1. It would be difficult to use a kerosene lamp.
2. One would not be able to use a straw to consume a soft drink.
3. the blotting paper would fail to function.
4. the big trees that we see around would not have grown on the earth. Which of the statements given above is/are correct?
(a) 1, 2 and 3 only (b) 1, 3 and 4 only
(c) 2 and 4 only (d) 1, 2, 3 and 4

12. The blue colour of water in the sea. What is the reason behind the phenomenon?
(a) Refraction of the blue light by the impurities in sea water.
(b) Scattering of blue light by water molecules.
(c) Refraction of blue sky by sea water.
(d) Absorption of other colours except the blue colour by water molecules.

13. What is the "kiss of death"?
(a)A flower whose smell was the basis of a discovery on smell that led to award of 2004 Nobel Prize in Medicine.
(b) A chemical whose discovery ultimately won the scientists the 2004 Nobel Prize in Chemistry.
(c) A good wine flavour working on which scientist won the 2004 Nobel Prize in Chemistry.
(d) A network in brain associated with smell whose

14. Hydrogen bomb is based on the principle of
(a) controlled fusion reaction
(b) uncontrolled fusion reaction
(c) controlled fission reaction
(d) uncontrolled fission reaction

15. Which of the following substances is/are ozone depleting?
Select the correct answer from the codes given below:
1. Chlorofluorocarbons 2. Halons 3. Carbon
(a) 1 only (b) 1 and 2 only
(c) 2 and 3 only (d) 1, 2 and 3

16. Helium is preferred to hydrogen in air balloons because it
(a) is cheaper
(b) is less dense
(c) has greater lifting power
(d) does not form an explosive mixture with air

17. Which one of the following pairs is correctly matched?
(a) Silver iodide — Horn silver
(b) Silver chloride — Artificial rain
(c) Zinc phosphide — Rat poison
(d) Zinc sulphide — Philosopher's wool

18. While tinning of brass utensils, the ammonium chloride powder used to clean the hot utensil produces fumes of
(a) ammonia
(b) carbon monoxide
(c) hydrochloric acid
(d) ammonia and hydrochloric acid

19. Hydrofluoric acid is not kept in glass bottles because it reacts with
(a) visible light
(b) sodium oxide of glass
(c) aluminum oxide of glass
(d) silicon dioxide of glass

20. In the process of electroplating a utensil with zinc,
(a) the utensil is made the cathode
(b) pure zinc is made the anode
(c) the utensil is made the cathode and pure zinc is made the anode
(d) the utensil is made the anode and pure zinc is made the cathode

21. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Silicon carbide	1. Photosynthesis
B. Carbon fibre	2. Refrigerant
C. Carbon dioxide	3. Artificial diamond
D. Dichloro-difluro-	4. Aircraft methane

22. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Silicon carbide	1. Photosynthesis
B. Carbon fibre	2. Refrigerant
C. Carbon dioxide	3. Artificial diamond
D. Dichloro-difluro-	4. Aircraft methane

(a) 4 3 1 2 (b) 3 4 1 2
(c) 2 3 1 4 (d) 3 2 1 4

23. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Sour milk	1. Malic acid
B. Vinegar and pickle	2. Carbonic acid
C. Soda water	3. Acetic acid
D. Apple	4. Lactic acid

(a) 1 2 3 4 (b) 4 3 1 2
(c) 4 3 2 1 (d) 3 4 2 1

24. Enriched uranium is
(a) Uranium rods kept under special shield
(b) Natural uranium in which the component of radioactive isotope U235 is artificial increased
(c) Natural uranium mixed with thorium
(d) Uranium rods coated with chromium

25. The inexhaustible source of energy of the stars is due to
(a) conversion of hydrogen to helium
(b) conversion of helium to hydrogen
(c) decay of radioactive elements
(d) excess of oxygen that helps burning and release of energy

26. When soggy biscuits are kept inside the fridge for sometime they become crisp because

(a) cooling releases extra moisture
(b) humidity inside the fridge is low and extra moisture is absorbed
(c) humidity inside the fridge is high and extra moisture is absorbed
(d) pressure inside the fridge is high and helps in releasing extra moisture

27. Which one of the following statements is not true about cosmic rays?
(a) They are electromagnetic waves
(b) They have very short wavelength
(c) They are made of highly energetic charged particles
(d) They originated from the sun

28. In cold weather, aquatic animals survive even when water to the top layer of the lake freezes into ice because
(a) they can breathe in ice
(b) they have enough of accumulated oxygen inside them .
(c) their body structure is such that they can survive without oxygen.
(d) water has highest density of 4°C so underneath the top layer of ice there is layer of water

29. Which one of the following is NOT correct?
(a) Theory of evolution was propounded by Charles Darwin.
(b) The breaking apart of the nucleus of an atom is called fusion.
(c) Dry ice is nothing but solid carbon dioxide.
(d) Telephone was invented by Graham Bell.

30. Consider the following statements: Assertion (A): LPG is a pollution free vehicular fuel.
Reason (R): Plying of CNG fuelled-buses is recommended for metropolitan cities in India.
(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true

31. Biogas mainly consists of
(a) Carbon dioxide and hydrogen
(b) Hydrogen and methane
(c) Carbon dioxide and methane
(d) Hydrogen and oxygen

32. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Potassium bromide	1. Fertilizer
B. Potassium nitrate	2. Photography
C. Potassium sulphate	3. Bakery
D. Monopotassium tartarate	4. Gunpowder

(a) 2 4 1 3 (b) 2 4 3 1
(c) 4 2 3 1 (d) 4 2 1 3

33. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. German silver	1. Tin
B. Solder	2. Nickel
C. Bleaching powder	3. Sodium
D. Hypo	4. Chlorine

(a) 1 2 4 3 (b) 2 1 3 4
(c) 1 2 3 4 (d) 2 1 4 3

34. Living in the atmosphere of CO is dangerous because it
(a) Reduces organic matter of tissues
(b) Dries up the blood
(c) Combined with O2 present inside to form CO2
(d) Combines with hemoglobin and makes it incapable of absorbing oxygen

35. Consider the following statements: Hard water is not suitable for
1. Drinking 2. Washing clothes with soap
3. Use in boilers 4. Irrigating crops
Which of these statements are correct?
(a) 1 and 3 (b) 2 and 3
(c) 1, 2 and 4 (d) 1, 2, 3 and 4

36. Domestic cooking gas consists of mostly
(a) Methane and ethane
(b) Liquefied butane and isobutene
(c) Ethylene and carbon monoxide
(d) Hydrogen and acetylene

37. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. CNG	1. Carbon monoxide, hydrogen
B. Coal gas	2. Butane, propane
C. LPG	3. Butane, ethane
D. Water gas	4. Hydrogen, methane, CO

(a) 2 1 3 4 (b) 3 4 2 1
(c) 2 4 3 1 (d) 3 1 2 4

38. What is the role of ultraviolet (UV) radiation in the water purification system?
1. It inactivates / kills the harmful

microorganisms in water.
2. It removes all the undesirable odours from the water.
3. It quickens the sedimentation of solid particles and improves the clarity of water.
Which of the statements given above is/are correct?
(a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

39. Which one of the following sets of elements was primarily responsible for the origin of life on the Earth?
(a) Hydrogen, oxygen, sodium
(b) Carbon, hydrogen, nitrogen
(c) Oxygen, calcium, phosphorus
(d) Carbon, hydrogen, potassium

40. A sample of chloroform before using as an anaesthetic, is tested by
(a) Fehling's solution
(b) Ammonical cuprous chloride
(c) Ammonical silver nitrate solution
(d) Silver nitrate solution after boiling with alcoholic KOH

41. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Bleaching	1. Calcium powder oxychloride
B. Gypsum	2. Calcium sulphate
C. Marble	3. Calcium carbonate

(a) 1 2 3 (b) 2 3 1
(c) 1 3 2 (d) 2 1 3

42. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Limestone	1. Cement
B. Copper	2. Electrical goods
C. Bauxite	3. Manufacture of aeroplanes
D. Manganese	4. Steel

(a) 1 2 3 4 (b) 2 3 1 4
(c) 4 3 2 1 (d) 3 4 1 2

43. Which one of the following pairs is not correctly matched?
(a) Dry ice : Solid carbon dioxide
(b) Mustard gas : Poisonous liquid used in chemical warfare
(c) Teflon : Polymer containing fluorine
(d) Fullerene : Organic compounds containing fluorine

44. Match List-I with List-II and select the correct answer from the codes given below:

List-I	List-II
A. Diamond	1. Calcium
B. Marble	2. Silicon
C. Sand	3. Aluminium
D. Ruby	4. Carbon

(a) 1 2 3 4 (b) 4 1 2 3
(c) 3 1 2 4 (d) 4 2 1 3

45. Consider the following statements and select the correct code. As sertion (A): The main constituent of the liquefied petroleum gas is methane. Reason (R): Methane can be used directly for burning in homes and factories where it can be supplied through pipelines.
(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

46. Which one among the following statements regarding the properties of mixtures and compounds is not correct?
(a) A mixture shows the properties of its
(b) constituents but the properties of a compound are entirely different from its constituents
(b) A mixture may be homogeneous or heterogeneous but a compound is a homogeneous substance
(c) The constituents of a mixture can be separated by physical methods but those of a compound cannot be separated by physical methods
(d) Energy is either absorbed or evolved during the preparation of a mixture but not in the preparation of a compound

47. Which of the following pairs is/are correctly matched?
1. Isotopes : Atoms with same atomic number but different atomic mass.
2. Isobars : Atoms with same number of neutrons but different atomic number.
3. Isotones : Atoms with same mass number but different atomic number.
Select the correct answer using the codes given below :
(a) 1, 2 and 3 (b) 1 only
(c) 1 and 2 only (d) 2 only

48. Match List–I with List–II and select the correct answer using the code given below:

List-I (Scientist)	List-II (Discovery)

A. Goldstein 1. Atomic theory
B. Chadwick 2. Proton
C. JJ Thomson 3. Neutron
(a) 2 3 4 1 (b) 2 4 3 1
(c) 1 4 3 2 (d) 1 3 4 2

49. Consider the following statements regarding diamond: 1. It is an allotrope of silicon. 2. It is a bad conductor of heat and electricity. 3. It is the hardest substance. 4. It burns to produce carbon dioxide.
Which of the statements given above are correct?
(a) 1, 2, 3 and 4 (b) 2, 3, and 4
(c) 1 and 2 (d) 1, 3 and 4

50. Following statements are made in connection with carbon dioxide (CO_2)
1. CO_2 is a poisonous gas.
2. CO_2 is an acidic oxide.
3. CO_2 turns limewater milky.
Which of the statements given above is/are correct?
(a) 1 and 2 (b) 2 and 3
(c) 3 only (d) 1 and 3

51. Which of the following statements about diamond are correct?
1. It is used as a gem in jewellery because of its ability to reflect light.
2. It is good conductor of electricity.
3. It is used for cutting glass, marble stones and other hard materials.
4. It is used for drilling of rocks.

Select the correct answer using the codes given below :

(a) 1, 3 and 4 (b) 2, 3 and 4
(c) 1, 2 and 3 (d) 2 and 4

52. Consider the following statements :
1. Diamond is hard and graphite is soft.
2. Diamond is soft and graphite is hard.
3. Diamond is a bad conductor but graphite is a good conductor.
4. Diamond is a good conductor but graphite is a bad conductor.
Which of the statements given above is/are correct ?
(a) 1 and 3 (b) 1 only
(c) 2 and 3 (d) 1 and 4

53. Consider the following statements: Nitrogen is an essential constituent of
1. soils
2. animals
3. plants
Which of the statements given above is/are correct ?
(a) 3 only (b) 1 and 3 only
(c) 1 and 2 only (d) 1, 2 and 3

54. When iron is left exposed in open air, it gets rusted. Which constituent(s) of air is /are responsible for rusting iron? 1. Oxygen gas present in air 2. Moisture present in air 3. Carbon dioxide gas present in air Select the correct answer using the codes given below :
(a) 1 only (b) 2 only (c) 1 and 2 (d) 2 and 3

55. Which of the statements given below is/are correct? Permanent hardness of water is due to the presence of soluble.
1. chloride of calcium
2. bicarbonate of calcium
3. sulphate of magnesium
4. bicarbonate of magnesium Select the correct answer using the codes given below.
(a) 1 only (b) 1 and 3
(c) 2 and 4 (d) 1, 2 and 3

56. Consider the following statements : 1. An alloy is a mixture of two or more metals. 2. An alloy is a mixture of a metal or metals with a non-metal. Which of the statements given above is/are correct ?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

57. Match List–I with List–II and select the correct answer using the codes given below :

List–I (Compound)	List–II (Use)
A. Cellulose nitrate	1. Soft soap
B. Potassium sulphate	2. Gun powder
C. Potassium salt	3. Fertilizer of fatty acids
D. Calcium oxide	4. Glass

(a) 2 3 1 4 (b) 3 2 1 4
(c) 4 1 2 3 (d) 3 1 2 4

58. What are the elements which are liquids at room temperature and standard pressure? 1. Helium 2. Mercury 3. Chlorine 4. Bromine Select the correct answer using the codes given below:
(a) 2 and 3 only (b) 2, 3 and 4
(c) 2 and 4 only (d) 1 and 3 only

59. The correct order of these fuels in terms of their calorific value in increasing order is
1. Hydrogen gas
2. Kerosine oil
3. Charcoal
4. Wood
(a) 4, 3, 2, 1 (b) 4, 2, 3, 1

(c) 1, 2, 3, 4 (d) 1, 3, 2, 4

60. The correct order of these fuels in terms of their calorific value in increasing order is
1. Hydrogen gas
2. Kerosine oil
3. Charcoal
4. Wood
(a) 4, 3, 2, 1 (b) 4, 2, 3, 1
(c) 1, 2, 3, 4 (d) 1, 3, 2, 4

61. Consider the following statements 1. Most of the metal oxides are insoluble in water. 2. Sodium oxide and potassium oxide are metal oxides and hence insoluble in water.
The correct answer is
(a) Only 1 is true
(b) Only 2 is true
(c) 1 and 2 both are true
(d) Neither of the two is true

62. If by mistake some radioactive substance get into human body, than from the point of view radiation damage, the most harmful will be one that emits –
(a) g - rays (b) Neutrons
(c) b - rays (d) a - rays

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(a) g - rays (b) Neutrons
(c) b – rays (d) a - rays

64. Match List - I (oxidation number) with List - II (The element) and select the correct answer using the code given below the list :

List – I (Oxidation number)	List – II (The element)
A. 2	1. Oxidation number of Mn in MnO_2
B. 3	2. Oxidation number of S in $H_2S_2O_7$
C. 4	3. Oxidation number of Ca in CaO
D. 6	4. Oxidation number of Al in $NaAlH_4$

(a) 3 4 1 2 (b) 4 3 1 2
(c) 3 4 2 1 (d) 4 3 2 1

65. The pH of water at 25°C is 7. When it is heated to 100°C, the pH of water
(a) Increases
(b) Decreases
(c) Remains same
(d) Decreases up to 50°C and then increases

66. Consider the following statements and select the correct code. Assertion (A) : In the periodic table of chemical elements, electron affinity is always found to increase from top to bottom in a group Reason (R) : In a group, the atomic radii generally increase from top to bottom.
(a) Both A and R are individually true and R is correct explanation of A
(b) Both A and R are individually true and R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

67. What happened when a hard boiled egg after shelling is immersed in saturated brine?
(a) It shrinks
(b) It grows in size
(c) Its size remains unchanged
(d) it initially grows in size and then shrinks

68. Consider the following statements : The purpose of adding sodium sulphate and sodium silicate to washing powder is –
1. To keep washing powder dry
2. To maintain the alkalinity of the powder
which of these statements is/are correct ?
(a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) Neither 1 nor 2

69. In the hooch tragedy (casualty occurring due to the wine poisoning) sometimes the incidents of blindness occurs due to the poisonous substance:
(a) ethyl alcohol (b) methyl alcohol
(c) amyl alcohol (d) benzyl alcohol

70. It is suggested by the doctors that the person suffering from prostrates in the kidney or gallbladder should not consume excessively the food stuffs like tomatoes, eggs, milk etc which are the major causes of the crystal formation as the prostrates, which is made of :
(a) Calcium phosphate
(b) Calcium Oxalate
(c) Calcium chloride
(d) Calcium sulphate

71. Match column-I (acid) with column-II (use) and select the correct answer using the code given below the columns :

Column I (Acid)	Column II (Use)
A. Oxalic acid	(p) As an eye-wash,
B. Nitric acid	(q) For making explosives
C. Boric acid	(r) In food preservation
D. Benzoic acid	(s) As a ink stain remover

(a) A – (s), B – (q), C – (r), D – (p)
(b) A – (q), B – (s), C – (p), D – (r)
(c) A – (r), B – (q), C – (p), D – (s)
(d) A – (s), B – (q), C – (p), D – (r)

72. column-I with column-II and select the correct answer using the code given below the columns. Column I Column II
A. Fertilizer (p) King of chemicals
B. Sulphuric acid (q) Basic
C. Lime water (r) Magnesium hydroxide
D. Milk of magnesia (s) Potassium nitrate
(a) A – (s), B – (p), C – (q), D – (r)
(b) A – (r), B – (p), C – (q), D – (s)
(c) A – (s), B – (q), C – (p), D – (r)
(d) A – (s), B – (p), C – (r), D – (q)

73. The compound that has the least value for octane number is
(a) n-heptanes
(b) 2-methyl heptanes
(c) I so-octane
(d) 2, 2-dimethyl hexane

74. The credit of construction of first nuclear reactor goes to
(a) Niels Bohr (b) Fermi
(c) Einstein (d) Oppenheimer

75. Which of the following is/are not correctly matched?
(I) Absolute alcohol – 100% ethanol
(II) Power alcohol – 90 – 95% ethanol
(III) Rectified spirit – 5% ethanol
(a) I only (b) II only
(c) III only (d) II and III

76. Which of the following can be used for removal of stains of rust on clothes?
1. H_2O_2
2. Oxalic acid
3. Petrol
4. Alcohol
(a) 1 and 2 (b) 2 only
(c) 3 and 4 (d) 1, 2, 3 and 4

77. From which mineral is radium obtained –
(a) Limestone (b) Hematite
(c) Pitchblende (d) Rutile

78. . Why ethylene dibromide is added to petrol - 1. It increases the octane number of fuel 2. It helps in elimination of lead oxide 3. It removes the sculpture compound in petrol 4. It serves as a substitute of tetraethyl lead
(a) 1 and 2 (b) 2 and 3
(c) 1 only (d) 2 only

79. Why ethylene dibromide is added to petrol –
1. It increases the octane number of fuel
2. It helps in elimination of lead oxide
3. It removes the sulphur compound in petrol
4. It serves as a substitute of tetraethyl lead
(a) 1 and 2 (b) 2 and 3
(c) 1 only (d) 2 only

80. Which of the following is/are not caused due to Nitric oxide pollution –
1. leaf spotting in plants
2. bronchitis-related respiratory problems in human
3. production of corrosive gases through photochemical reaction
4. silicosis in human
(a) 1 and 3 (b) only 1
(c) 1, 2 and 4 (d) only 4

81. Sodium stearate is a salt and is used
(a) in gunpowder (b) in Paint
(c) to make Soap (d) to make fertilizer

82. Which of the following atmospheric gases constitute greenhouse gases?
1. Carbon dioxide 2. Nitrogen
3. Nitrous oxide 4. Water vapor
(a) 1, 3 and 4 (b) 1 and 3
(c) 1 only (d) 3 only

83. Which of the following copper alloys is used for the manufacture of springs and suspension filaments in electrical instruments?
(a) Bronze
(b) Aluminum bronze
(c) German silver
(d) Phosphor bronze

84. Which of the following is correctly matched?
(a) Aluminium-Haematite
(b) Lead-Galena
(c) Iron-Bauxite
(d) Magnesium-Malachite

85. Which of the following is correctly matched?
(a) Aluminum- Hematite
(b) Lead-Galena
(c) Iron-Bauxite
(d) Magnesium-Malachite

86. What does the airbag, used for safety of car driver, contain?
(a) Sodium bicarbonate
(b) Sodium aside
(c) Sodium nitrite
(d) Sodium peroxide

87. Which one among the following elements/ions is essential in small quantities for development of healthy teeth but causes mottling of the teeth if consumed in higher quantities?
(a) Fluoride (b) Iron
(c) Chloride (d) Potassium

88. Match List-I with List-II and select the correct answer using the code given below the lists-
List-I List-II
(A) Formic acid 1. Tamarind
(B) Tartaric acid 2. Orange

(C) Oxalic acid 3. Spinach
(D) Citric acid 4. Ant's sting
(a) 2 3 1 4 (b) 2 1 3 4
(c) 4 3 1 2 (d) 4 1 3 2

89. Which of the following is likely to reach our body via the food chain in the event of an atomic bomb explosion?
(a) U-235 (b) Sr-90
(c) K-40 (d) H-3

90. Until the nineteenth Century, aluminum was almost as expensive as gold. The invention of an inexpensive way to extract this metal by a 22-year-old American made this metal inexpensive subsequently. The inventor was
(a) Goldschmidt (b) Mond
(c) Charles-Martin Hall (d) Parkes

91. Which one of the following pairs is mismatched
(a) Fossil fuel burning - release of CO2
(b) Nuclear power - radioactive wastes
(c) Solar energy - Greenhouse effect
(d) Biomass burning - release of CO2

92. Which one of the following pairs is correctly matched ?
(a) Mass Spectrograph : Chadwick
(b) Atomic number : Moseley
(c) Neutron : Millikan
(d) Measurement of charge of an electron : Aston

93. While performing cathode ray experiments, it was observed that there was no passage of electric current under normal conditions. Which of the following can account for this observation ?
(a) Dust particles are present in air
(b) Carbon dioxide is present in air
(c) Air is a poor conductor of electricity under normal conditions
(d) None of the above

94. Consider the following statements : In 90 2 38Sr + : (i) atomic number is 36 (ii) number of electrons is 38 (iii) number of neutrons is 52 (iv) number of protons is 38 Which of these are correct ?
(a) (i) and (ii) (b) (ii) and (iii)
(c) (iii) and (iv) (d) (i) and (iv)

95. Solid calcium oxide reacts vigorously with water to form calcium hydroxide accompanied by liberation of heat. This process is called slaking of lime. Calcium hydroxide dissolves in water to form its solution called lime water. Which among the following is (are) true about slaking of lime and the solution formed? (i) It is an endothermic reaction (ii) It is an exothermic reaction (iii) The pH of the resulting solution will be more than seven (iv) The pH of the resulting solution will be less than seven
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i) and (iv) (d) (iii) and (iv)

96. Consider the following statements : (i) Washing soda on strong heating gives sodium oxide and carbon dioxide. (ii) Plaster of Paris is obtained by heating gypsum at 373 K. (iii) Bleaching powder is used for disinfecting drinking water. Which of these statement(s) is/are correct ?
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i) and (iii) (d) All are correct

97. Consider the following statements (a) A molecule of sulphur contains 4 sulphur atoms. (b) Metals placed below hydrogen in activity series lose electrons to H+ ions of acids. (c) Silver acquires a blackish tinge when exposed to air for a long time. Which of these statement(s) is/are correct?
(a) (a) and (b) (b) (a) and(c)
(c) (b) and (c) (d) Only (c)

98. In a sample of ethyl ethanoate (CH3COOC2H5) the two oxygen atoms have the same number of electrons but different number of neutrons. Which of the following is the correct reason for it?
(a) One of the oxygen atoms has gained electrons
(b) One of the oxygen atoms has gained two neutrons
(c) The two oxygen atoms are isotopes
(d) The two oxygen atoms are isobars.

99. Which of the following is/are the hazardous pollutant(s) present in automobile exhaust gases? (i) N2 (ii) CO (iii) CH4 (iv) Oxides of nitrogen
(a) (ii) and (iii) (b) (i) and (ii)
(c) (ii) and (iv) (d) (i) and (iii)

100. Which of the following is/are the hazardous pollutant(s) present in automobile exhaust gases? (i) N2 (ii) CO (iii) CH4 (iv) Oxides of nitrogen
(a) (ii) and (iii) (b) (i) and (ii)
(c) (ii) and (iv) (d) (i) and (iii)

21	B	51	A	81	D
22	C	52	A	82	C
23	B	53	C	83	D
24	A	54	C	84	B
25	B	55	B	85	D
26	B	56	A	86	B
27	D	57	D	87	A
28	B	58	A	88	D
29	D	59	C	89	B
30	C	60	A	90	C

Answer Key

1	D	31	A	61	D	91	C
2	A	32	D	62	A	92	B
3	D	33	D	63	A	93	C
4	D	34	B	64	A	94	C
5	B	35	B	65	B	95	B
6	B	36	B	66	D	96	B
7	A	37	A	67	C	97	D
8	A	38	B	68	A	98	C
9	A	39	A	69	B	99	C
10	C	40	C	70	B	100	A
11	B	41	A	71	D		
12	B	42	A	72	A		
13	B	43	D	73	A		
14	B	44	B	74	B		
15	D	45	D	75	D		
16	D	46	D	76	B		
17	C	47	B	77	C		
18	D	48	A	78	D		
19	D	49	B	79	D		
20	C	50	B	80	C		