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SSC-I NATIONAL BOOK FOUNDATION FBISE

CHEMISTRY TEST - CHAPTER 2: MATTER

Name:		Roll No.		Section:

Total Time: 2:30 Hour
Time Allowed: 150 Minutes

Total Marks: 150

PAPER OBJECTIVE
SECTION-A (MARKS 150)

NOTE: Section-A is compulsory. All parts of this section are to be answered on these pages and handed over to the center superintendent. Deleting / overwriting is not allowed. Do not use lead pencil.

Q.1 Fill the relevant bubble for each part. All parts carry one mark.

Questions	A	B	C	D	A B C D
1. Anything that has mass and occupies space is called:	Matter	Energy	Force	Light	●○○○
2. Which of these is an example of matter?	Air	Heat	Light	Sound	●○○○
3. Water, rocks and people are all examples of:	Matter	Waves	Energy	Force	●○○○
4. The building block of all matter is the:	Planet	Atom	Cell	Wave	○●○○
5. States of matter differ in the way the _____ that make them up are arranged.	Shapes only	Planets	Atoms	Colours	○○●○
6. How many states of matter are described in the book?	Seven	Three	Two	Four	○○○●
7. Which of these is a state of matter?	Plasma	Fire	Sound	Light	●○○○
8. The states of matter are solids, liquids, gases and:	Plasmas	Alloys	Metals	Crystals	●○○○
9. The state of matter is determined by the arrangement and movement of particles and the strength of:	Colour	Intermolecular and atomic forces	Gravity only	Sound	○●○○
10. Energy can change matter into different:	Planets	Names	Colours	States	○○○●
11. Solids become liquids or gases when:	Compressed only	Stirred	Heated	Cooled	○○●○
12. At very high temperature or in a strong electric field, a gas transforms into:	Liquid	Plasma	Alloy	Solid	○●○○

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Questions	A	B	C	D	A B C D
13. Plasma is an electrically charged gas affected by electrical and _____ fields.	Sound	Nuclear only	Magnetic	Colour	○○●○
14. Temperatures on Earth are not sufficient to ionize atoms and create:	Liquid	Solid	Gas	Plasma	○○○●
15. A liquid crystal has properties of liquids and some properties of:	Gases	BEC	Plasma	Solids	○○○●
16. When a liquid crystal is heated further, it changes to a:	Gas	Solid	Plasma	Transparent liquid	○○○●
17. BEC stands for:	Bose-Einstein Condensate	Boiling Element Compound	Basic Energy Cell	Binary Electron Cloud	●○○○
18. A BEC forms when atoms are cooled close to:	Absolute zero	Boiling point	Room temperature	100 degrees Celsius	●○○○
19. Superfluids and superconductors contain:	Gels	Plasma	BEC	Liquid crystals	○○●○
20. Macroscopic properties are those that can be seen by the:	Telescope only	X-rays	Naked eye	Electron microscope	○○●○
21. Which is a macroscopic property of matter?	Atomic number	Number of protons	Electron spin	Density	○○○●
22. Fluidity is a macroscopic property of:	Energy	Sound	Light	Matter	○○○●
23. Compressibility is a macroscopic property of:	Sound only	Heat only	Light	Matter	○○○●
24. Boiling water changes liquid water into:	Gas	BEC	Solid	Plasma	●○○○
25. Physical techniques convert states of matter by changing temperature or:	Mass	Name	Colour	Pressure	○○○●
26. In a physical change, the chemical composition of matter:	Changes completely	Becomes plasma	Stays the same	Is destroyed	○○●○
27. Matter can be described by both physical and _____ properties.	Chemical	Social	Musical	Political	●○○○
28. Atoms that have the same atomic number form an:	Solution	Mixture	Compound	Element	○○○●
29. The simplest form of matter that cannot be broken down chemically is an:	Element	Solution	Compound	Mixture	●○○○

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Questions	A	B	C	D	A B C D
30. A physical change alters the physical properties, while a chemical change forms a:	Same substance	New substance	Mixture	Solution	○●○○
31. A compound is formed when two or more different atoms:	Physically mix	Melt only	Dissolve only	Chemically combine	○○○●
32. A compound is _____ from the elements used to make it.	Completely different	Slightly different	Unrelated	Exactly the same	●○○○
33. A mixture is a physical combination of:	Protons	Nuclei only	Electrons only	Substances	○○○●
34. Tea made of milk, water, tea leaves and sugar is an example of a:	Compound	Element	Mixture	Allotrope	○○●○
35. The particles in a mixture are chemically:	Identical	Bonded together	Single atoms	Different from each other	○○○●
36. The property of an element to exist in different physical forms is called:	Allotropy	Isotopy	Polymerization	Fermentation	●○○○
37. Different forms of the same element in the same physical state are called:	Isotopes	Isomers	Allotropes	Alloys	○○●○
38. Diamond, graphite and buckyballs are allotropes of:	Carbon	Silicon	Sulphur	Oxygen	●○○○
39. Graphite is composed of flat layers of _____ arranged carbon atoms.	Triangular	Square	Randomly	Hexagonally	○○○●
40. In graphite each carbon atom is covalently bonded to how many other carbon atoms?	Three	Four	Six	Two	●○○○
41. Between graphite layers there are _____ intermolecular bonds.	Strong	Metallic	Weak	Ionic	○○●○
42. Graphite is ideal for use as a:	Insulator	Cutting tool	Jewel	Lubricant	○○○●
43. Graphite is a good conductor of:	Electricity	Neither heat nor electricity	Only light	Only sound	●○○○
44. The hardest and purest crystalline allotrope of carbon is:	Graphite	Diamond	Buckyball	Charcoal	○●○○
45. In diamond each carbon atom is bonded to how many other carbon atoms?	Four	Three	Two	Six	●○○○
46. The structure of diamond is:	Flat layers	Tetrahedral and three-dimensional	Spherical hollow	Linear chains	○●○○

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Questions	A	B	C	D	A B C D
47. Diamond is a non-conductor of electricity because it has:	Free protons	No free electrons	Free ions	Many free electrons	○●○○
48. Another name for buckyballs is:	Graphene	Graphite	Fullerenes	Diamond	○○●○
49. A buckyball is formulated as:	C-60	C-6	C-120	C-12	●○○○
50. A buckyball has a football-like hollow structure made of twenty hexagons and _____ pentagons.	Ten	Twelve	Sixty	Six	○●○○
51. Each of the 60 carbon atoms in a buckyball is bonded to how many carbon atoms?	Five	Four	Three	Two	○○●○
52. A homogeneous mixture of two or more substances is called a:	Suspension	Compound	Solution	Colloid	○○●○
53. In a solution, the substance that is dissolved is called the:	Solvent	Colloid	Solute	Precipitate	○○●○
54. In a solution, the substance in which the solute dissolves is the:	Solute	Solvent	Alloy	Residue	○●○○
55. In a solution, the particles are less than _____ in diameter.	1000 nm	1 cm	1 mm	1 nm	○○○●
56. In salt solution, the solute is:	Water	Salt	Sugar	Air	○●○○
57. In salt solution, the solvent is:	Alcohol	Air	Water	Salt	○○●○
58. In soft drinks, water is the solvent while sugar, salts and CO_2 are:	Alloys	Solutes	Colloids	Solvents	○●○○
59. In air, the solvent is:	Oxygen gas	Argon	Carbon dioxide	Nitrogen gas	○○○●
60. Solutions are found in how many physical states, based on the solvent?	Two	Four	Three	Five	○○●○
61. Air is an example of a:	Liquid solution	Gaseous solution	Solid solution	Colloid	○●○○
62. Sea water is an example of a:	Suspension	Liquid solution	Gaseous solution	Solid solution	○●○○
63. An alloy is an example of a:	Liquid solution	Gaseous solution	Suspension	Solid solution	○○○●

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Questions	A	B	C	D	A B C D
64. In a gaseous solution the solvent is a:	Liquid	Solid	Plasma	Gas	○○○●
65. A mixture of nitrogen and hydrogen is used in the Haber process for forming:	Methane	Water	Ammonia	Urea	○○●○
66. A mixture of ammonia and carbon dioxide is used for preparing:	Ammonia	Urea	Methane	Soda	○●○○
67. Fog, clouds and mist are examples of liquid water dissolved in:	Oil	Alcohol	Air	Mercury	○○●○
68. Smoke is a solution of _____ particles in air.	Salt	Sulphur	Iron	Carbon	○○○●
69. Carbonated drinks have liquid water as solvent and _____ as solute.	CO_2 gas	Hydrogen gas	Oxygen gas	Nitrogen gas	●○○○
70. Rectified spirit is produced by the fermentation of:	Starch only	Sugar cane	Salt	Iron	○●○○
71. Brine is a solution of salt in:	Water	Alcohol	Mercury	Oil	●○○○
72. Sugar syrup is a solution of sugar in:	Alcohol	Air	Water	Oil	○○●○
73. In the ghee industry, hydrogen gas on a nickel surface has nickel as the:	Solute	Liquid	Gas	Solvent (catalyst)	○○○●
74. A solution of a metal in liquid mercury is called:	Brine	Amalgam	Alloy	Syrup	○●○○
75. Brass and bronze are examples of:	Colloids	Brines	Amalgams	Alloys	○○○●
76. A solution formed by dissolving a substance in water is called:	Aqueous solution	Alloy	Gaseous solution	Colloid	●○○○
77. Water is called the universal solvent because it dissolves the:	Only gases	Only metals	Majority of compounds in Earth's crust	Only oils	○○●○
78. Aqueous solutions are mostly used in:	Deserts only	Laboratories	Mines	Oceans only	○●○○
79. A solution that contains the maximum amount of solute at a given temperature is:	Saturated	Dilute	Supersaturated	Unsaturated	●○○○
80. In a saturated solution, undissolved solute is in _____ with dissolved solute.	Dynamic equilibrium	Combustion	Chemical reaction	Static balance	●○○○

Questions	A	B	C	D	A B C D
81. In a saturated solution, dissolution and _____ continue at a given temperature.	Evaporation only	Distillation	Combustion	Crystallization	○○○●
82. A solution that contains less solute than needed to saturate it is:	Supersaturated	Unsaturated	Saturated	Concentrated only	○●○○
83. A solution more concentrated than a saturated solution is:	Supersaturated	Unsaturated	Dilute	Aqueous	●○○○
84. Supersaturated solutions are:	Always dilute	Always colloids	Not stable	Very stable	○○●○
85. An easy way to get a supersaturated solution is to prepare a saturated solution at high temperature and then:	Filter it	Heat it more	Cool it	Dilute it	○○●○
86. A crystal of sodium thiosulphate added to its supersaturated solution will cause:	Freezing	Crystallization	Dissolving	Boiling	○●○○
87. A crystal of sodium thiosulphate added to its saturated solution will:	Evaporate	Dissolve	Explode	Drop to the bottom undissolved	○○○●
88. Solutions are classified as dilute or concentrated on the basis of the relative amount of:	Solute	Temperature only	Solvent colour	Container	●○○○
89. A solution containing a relatively small amount of solute is:	Supersaturated	Saturated only	Dilute	Concentrated	○○●○
90. Brine is an example of a _____ solution.	Concentrated	Dilute	Colloidal	Gaseous	●○○○
91. Adding more solvent to a solution _____ its concentration.	Decreases	Does not change	Doubles	Increases	●○○○
92. The maximum amount of solute that dissolves in a specified amount of solvent at a specific temperature is:	Pressure	Molarity	Density	Solubility	○○○●
93. Solubility depends on the solvent, temperature and:	Shape	Name	Colour	Pressure	○○○●
94. The solubility of KCl with temperature:	Stays zero	Is unaffected	Increases	Decreases	○○●○
95. The solubility of NH_4Cl with temperature:	Increases	Is unaffected	Decreases	Stays zero	●○○○
96. The solubility of $Ca(OH)_2$ with increasing temperature:	Doubles	Decreases	Increases	Is unaffected	○●○○
97. Calcium hydroxide can be used to treat chemical burns and as an:	Paint	Fuel	Plastic	Antacid	○○○●

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Questions	A	B	C	D	A B C D
98. Table 2.2 shows solubility of salts in g per _____ of solvent.	1000 g	10 g	1 g	100 g	○○○●
99. A heterogeneous mixture whose particles range from 1 to 1000 nm is a:	Suspension	Compound	Colloid	Solution	○○●○
100. Colloids are also known as colloidal:	Solutions only	Dispersions	Elements	Compounds	○●○○
101. Particles of colloids can scatter a beam of light. This is called the:	Photoelectric effect	Tyndall effect	Greenhouse effect	Doppler effect	○●○○
102. The main characteristic that distinguishes colloids from solutions is the:	Weight	Tyndall effect	Colour	Taste	○●○○
103. Colloids are also called:	Elements	Compounds	False solutions	True solutions	○○●○
104. Which of these is a colloid?	Vinegar	Milk	Salt solution	Sugar solution	○●○○
105. Another example: Which of these is a colloid?	Sugar syrup	Blood	Rectified spirit	Brine	○●○○
106. Yet another: Which of these is a colloid?	Brass	Ink	Vinegar	Brine	○●○○
107. One more: Which of these is a colloid?	Brine	Brass	Toothpaste	Air	○○●○
108. Also: Which of these is a colloid?	Brine	Jelly	Vinegar	Brass	○●○○
109. Starch and albumin solutions are examples of:	True solutions	Suspensions	Colloids	Alloys	○○●○
110. A heterogeneous mixture where solid particles are spread in a liquid without dissolving is a:	Solution	Alloy	Suspension	Compound	○○●○
111. Particles of a suspension can be seen with the:	X-rays only	Telescope only	Electron microscope only	Naked eye	○○○●
112. Chalk in water is an example of a:	Suspension	Solution	Colloid	Alloy	●○○○
113. Milk of magnesia is a suspension of _____ in water.	Calcium oxide	Sodium chloride	Magnesium oxide	Aluminium oxide	○○●○
114. Paints are examples of:	Alloys	Compounds	Suspensions	True solutions	○○●○

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Questions	A	B	C	D	A B C D
115. Particles of a true solution can pass through:	Only a brick	No filter paper	Only a net	Ultra-filter paper	○○○●
116. Which mixture does NOT scatter light?	True solution	Suspension	Colloid	Fog	●○○○
117. A true solution is a _____ mixture.	Cloudy	Heterogeneous	Suspended	Homogeneous	○○○●
118. A suspension is a _____ mixture.	Homogeneous	Heterogeneous	Pure	Stable	○●○○
119. Which mixture settles down on standing?	Alloy	Suspension	Solution	Colloid	○●○○
120. Which of these is a heterogeneous mixture?	Sugar in water	Salt in water	Vinegar	Chalk in water	○○○●
121. Which of these is a homogeneous mixture?	Milk of magnesia	Chalk in water	Paint	Sugar in water	○○○●
122. If there are 18 protons in an argon atom, its atomic number is:	9	40	18	36	○○●○
123. The chemical formula of the carbon dioxide gas that we exhale is:	O_2C_2	C_2O	CO_2	CO	○○●○
124. The formula of water is:	H_2O_2	HO_2	H_2O	OH_2	○○●○
125. Salt (sodium chloride) is a:	Element	Compound	Allotrope	Mixture	○●○○
126. Oxygen gas (O_2) is an example of an:	Compound	Element	Mixture	Solution	○●○○
127. Air is a:	Element	Mixture	Compound	Pure substance	○●○○
128. Sea water is a:	Mixture	Allotrope	Element	Compound	●○○○
129. Which of these is a pure substance?	Milk	Water	Air	Tea	○●○○
130. Which of these is a mixture?	Oxygen	Diamond	Tea	Water	○○●○
131. A compound can be separated into its elements by:	Sieving	Chemical means	Filtration	Magnet	○●○○

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Questions	A	B	C	D	A B C D
132. A mixture can be separated by:	Physical means	Only electrolysis	Not at all	Only chemical reactions	●○○○
133. The atoms of an element have the same:	Neutron number	Shape	Atomic number	Mass number	○○●○
134. Which of the following is an allotrope pair?	Gold and silver	Water and ice	Salt and sugar	Diamond and graphite	○○○●
135. The exercise suggests making a poster of different forms of matter in the students':	Everyday environment	Class register	Laboratory only	School bag only	●○○○
136. The conversion of solid directly into gas on heating is not described; but a solid becoming liquid is called:	Condensation	Sublimation	Freezing	Melting	○○○●
137. The Earth's temperatures are not enough to ionize atoms and form:	Liquids	Gases	Solids	Plasma	○○○●
138. Which solution type has solvent as a solid?	Solid solution	Liquid solution	Gaseous solution	Aqueous solution	●○○○
139. Which of these is a gaseous solution?	Sea water	Air	Brine	Brass	○●○○
140. Which of these is a liquid solution?	Brass	Sea water	Air	Bronze	○●○○
141. Which of these is a solid solution?	Bronze	Vinegar	Air	Sea water	●○○○
142. The solubility curve shows the variation of solubility with:	Colour	Density only	Temperature	Pressure only	○○●○
143. The effect of temperature on solubility depends on the nature of the:	Solute	Container	Time	Observer	●○○○
144. A dilute solution contains _____ solute relative to solvent.	Little	Maximum	Much	No	●○○○
145. A concentrated solution contains _____ solute relative to solvent.	A relatively small amount of	Only gas	A relatively large amount of	No	○○●○
146. Which of these is NOT a state of matter?	Solid	Energy	Gas	Liquid	○●○○
147. Which of the following is made of atoms of one type only?	A mixture	A compound	A solution	An element	○○○●
148. The unit that follows Matter in the book is:	Atomic Structure	Chemical Bonding	Stoichiometry	Energetics	●○○○

Questions	A	B	C	D	A B C D
149. The Tyndall effect can be used to test whether a given solution is a:	Colloid	Gas	Suspension only	Metal	●○○○
150. The solute particles in colloids are larger than those in true solutions but not visible to the:	Telescope	Camera	Microscope	Naked eye	○○○●

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