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SSC-I NATIONAL BOOK FOUNDATION FBISE

CHEMISTRY TEST - CHAPTER 15: BIOCHEMISTRY

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. Nutrition is the source of food required by living things to stay:	Dry	Cold	Alive	Asleep	○○●○
2. Good nutrition forms an important part of a:	Short life	Sedentary lifestyle	Healthy lifestyle	Careless life	○○●○
3. What you eat directly affects the structure and function of your:	Shoes	Nails only	Brain	Hair only	○○●○
4. Food is a _____ that drives the processes of life.	Fuel	Metal	Rock	Salt	●○○○
5. Biochemistry is a combination of biology and:	Chemistry	Geography	History	Physics	●○○○
6. Biochemistry is the study of _____ matter.	Gaseous only	Living	Dead	Non-living	○●○○
7. Biochemistry studies organic and inorganic molecules present in a:	Rock	River	Machine	Living organism	○○○●
8. Which provides energy to the body to grow, play and repair?	Air only	Water only	Carbohydrates, fats and proteins	Salt only	○○●○
9. The main biomolecules include carbohydrates, proteins, lipids and:	Nucleic acids	Metals	Salts	Gases	●○○○
10. Carbohydrates are made of carbon, hydrogen and:	Nitrogen	Oxygen	Sulphur	Chlorine	○●○○
11. Carbohydrates are also called hydrates of:	Nitrogen	Carbon	Oxygen	Hydrogen	○●○○
12. The primary function of carbohydrates is to supply:	Enzymes	Genes	Energy	Hormones	○○●○

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Questions	A	B	C	D	A B C D
13. 1 gram of carbohydrate provides about _____ kilocalories.	4	1	9	2	●○○○
14. 1 gram of protein provides about _____ kilocalories.	9	2	4	1	○○●○
15. 1 gram of lipid provides about _____ kilocalories.	1	4	2	9	○○○●
16. Which nutrient gives the most energy per gram?	Carbohydrates	Proteins	Vitamins	Lipids	○○○●
17. The body breaks down carbohydrates into:	Fatty acids	Amino acids	Nucleotides	Glucose	○○○●
18. The preferred fuel for the brain is:	Protein	Fat	Water	Glucose	○○○●
19. Without suitable carbohydrates the body breaks down muscle protein and:	Body fat	Bones	Hair	Teeth	●○○○
20. Carbohydrates are classified based on the number of _____ in the molecule.	Vitamins	Sugars	Fats	Proteins	○●○○
21. Glucose is a:	Polysaccharide	Protein	Disaccharide	Monosaccharide	○○○●
22. Fructose is a:	Lipid	Monosaccharide	Disaccharide	Polysaccharide	○●○○
23. Sucrose is a:	Disaccharide	Polysaccharide	Monosaccharide	Protein	●○○○
24. Lactose is a:	Disaccharide	Polysaccharide	Protein	Monosaccharide	●○○○
25. Maltose is a:	Polysaccharide	Monosaccharide	Lipid	Disaccharide	○○○●
26. Starch is a:	Protein	Polysaccharide	Disaccharide	Monosaccharide	○●○○
27. Cellulose is a:	Disaccharide	Monosaccharide	Lipid	Polysaccharide	○○○●
28. Glycogen is a:	Protein	Disaccharide	Monosaccharide	Polysaccharide	○○○●
29. The formula of glucose is:	$C_{12}H_{22}O_{11}$	CH_2O_2	$C_6H_{10}O_5$	$C_6H_{12}O_6$	○○○●
30. The formula of sucrose is:	$C_6H_{10}O_5$	$C_5H_{10}O_5$	$C_{12}H_{22}O_{11}$	$C_6H_{12}O_6$	○○●○

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Questions	A	B	C	D	A B C D
31. Table sugar is:	Sucrose	Fructose	Glucose	Lactose	●○○○
32. Milk sugar is:	Lactose	Glucose	Maltose	Sucrose	●○○○
33. Fruit sugar is:	Fructose	Sucrose	Glucose	Lactose	●○○○
34. The main storage form of carbohydrate in plants is:	Cellulose	Glucose	Glycogen	Starch	○○○●
35. The main storage form of carbohydrate in animals is:	Cellulose	Sucrose	Starch	Glycogen	○○○●
36. Plant cell walls are made of:	Starch	Lactose	Glycogen	Cellulose	○○○●
37. Potatoes, cereals, beans, pulses and oats are rich in:	Fats	Proteins	Vitamins	Carbohydrates	○○○●
38. Carbohydrates are _____ in water and readily broken down into sugars.	Unreactive	Soluble	Insoluble	Gaseous	○●○○
39. Carbohydrates can be converted into fats and:	Salts	Gases	Amino acids	Metals	○○●○
40. A carbohydrate-deficient diet may cause headaches, fatigue and:	Fractures	Weakness	Sprains	Colour blindness	○●○○
41. Fibre helps to feel full and aids:	Seeing	Breathing	Digestion	Sleeping	○○●○
42. Every cell in the human body contains:	Protein	Metal	Glass	Plastic	●○○○
43. The basic structure of protein is a chain of:	Fatty acids	Amino acids	Sugars	Nucleotides	○●○○
44. The building blocks of proteins are:	Amino acids	Sugars	Nucleotides	Fatty acids	●○○○
45. A bond between two amino acids is called a:	Ionic bond	Acidic bond	Peptide bond	Hydrogen bond	○○●○
46. A short chain of amino acids is a:	Lipid	Peptide	Protein	Carbohydrate	○●○○
47. A longer amino acid chain with secondary structure is a:	Protein	Peptide	Carbohydrate	Lipid	●○○○

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Questions	A	B	C	D	A B C D
48. When proteins are digested, they are broken down into:	Amino acids	Sugars	Fatty acids	Nucleotides	●○○○
49. Proteins and amino acids are the building blocks of:	Gases	Life	Metals	Rocks	○●○○
50. Many hormones are:	Sugars	Gases	Proteins	Salts	○○●○
51. Enzymes that speed up chemical reactions are:	Salts	Sugars	Metals	Proteins	○○○●
52. Proteins are essential for wound healing and _____ function.	Glass	Brain	Rock	Plastic	○●○○
53. Meat, fish, eggs and milk are rich in:	Proteins	Cellulose	Starch	Glucose	●○○○
54. Which of these is a source of plant-based protein?	Oil	Beans and pulses	Rice only	Sugar	○●○○
55. Which of these is NOT a disorder caused by protein deficiency?	Constipation	Weight loss	Loss of muscle strength	Muscle fatigue	●○○○
56. Children in villages frequently suffer from infectious diseases due to weak immunity from lack of:	Lipids	Proteins	Water	Carbohydrates	○●○○
57. Lipids are fatty, waxy or _____ compounds.	Metallic	Salty	Gaseous	Oily	○○○●
58. Lipids are soluble in organic solvents like alcohol and:	Chloroform	Water	Acid	Brine	●○○○
59. Lipids are _____ in polar solvents such as water.	Reactive	Soluble	Ionized	Insoluble	○○○●
60. Lipids are mainly composed of hydrocarbons and _____ oxygen.	No	Equal	Much	Little	○○○●
61. Lipids are an excellent form of energy:	Release only	Loss	Storage	Waste	○○●○
62. Lipids are part of the cell:	Bones	Walls only	Nuclei only	Membranes	○○○●
63. Lipids help in absorbing:	Water	Vitamins	Minerals only	Gases	○●○○
64. Lipids help in making:	Gases	Salts	Metals	Hormones	○○○●

Questions	A	B	C	D	A B C D
65. The four fat-soluble vitamins are A, D, K and:	E	C	B	F	●○○○
66. Which vitamin is fat-soluble?	Vitamin A	Vitamin B	Vitamin B12	Vitamin C	●○○○
67. Another example: Which vitamin is fat-soluble?	Vitamin B2	Vitamin B6	Vitamin D	Vitamin C	○○●○
68. Yet another: Which vitamin is fat-soluble?	Vitamin B3	Vitamin C	Vitamin B1	Vitamin K	○○○●
69. One more: Which vitamin is fat-soluble?	Vitamin E	Vitamin B5	Vitamin C	Vitamin B7	●○○○
70. Vitamin C is _____ soluble.	Water	Oil	Fat	Alcohol	●○○○
71. Which foods contain fat-soluble vitamins?	Water and ice	Plastic and metal	Sugar and salt	Butternut squash, broccoli and salmon	○○○●
72. Eating dietary fat helps to absorb fat-soluble:	Sugars	Vitamins	Minerals only	Water	○●○○
73. Foods rich in fats include:	Cheese, butter and oil	Pulses and wheat	Rice and maize	Potatoes and oats	●○○○
74. Which of these is a lipid?	Rice	Starch	Sugar	Butter	○○○●
75. Another example: Which of these is a lipid?	Olive oil	Rice	Starch	Sugar	●○○○
76. Nucleic acids are large biomolecules, also called:	Ions	Macromolecules	Micromolecules	Atoms	○●○○
77. Nucleic acids contain _____ information.	Colour	Weather	Mass	Genetic	○○○●
78. Nucleic acids play a key role in protein:	Respiration	Excretion	Digestion	Biosynthesis	○○○●
79. The basic building block of nucleic acids is the:	Amino acid	Nucleotide	Fatty acid	Glucose	○●○○
80. DNA stands for:	Dioxyribonucleic acid	Deoxyribonucleic acid	Deoxyribonuclear acid	Dinucleic acid	○●○○
81. RNA stands for:	Rhodium nucleic acid	Ribonuclear acid	Ribonucleic acid	Ribosomal nucleic acid	○○●○

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Questions	A	B	C	D	A B C D
82. DNA is a _____ stranded nucleic acid.	Double	Triple	Quadruple	Single	●○○○
83. RNA is a _____ stranded nucleic acid.	Single	Quadruple	Triple	Double	●○○○
84. DNA contains the _____ substance for growth and functioning of living organisms.	Genetic	Metallic	Gaseous	Mineral	●○○○
85. RNA converts genetic information from genes into the amino acid sequences of:	Salts	Lipids	Sugars	Proteins	○○○●
86. Which carries genetic information from one generation to the next?	Starch	DNA	Cellulose	Vitamin C	○●○○
87. Nucleic acids are found in all:	Metals	Plastics	Living cells	Rocks	○○●○
88. Nutrition or diet is the total number of _____ we need.	Minerals only	Gases	Nutrients	Vitamins only	○○●○
89. A healthy diet requires micronutrients such as vitamins and:	Minerals	Plastics	Metals only	Gases only	●○○○
90. A healthy diet requires an adequate amount of:	Salt	Water	Sugar	Oil only	○●○○
91. A balanced diet describes all nutritional needs of a:	Person	Plant only	Machine	Rock	●○○○
92. A tip for a healthy meal is to eat more:	Fat	Vegetables and fruit	Salt	Sugar	○●○○
93. A tip for a healthy meal is to eat less:	Fruit	Water	Vegetables	Sugar	○○○●
94. Another example: A tip for a healthy meal is to eat less:	Water	Salt	Fruit	Vegetables	○●○○
95. A healthy diet includes eating a variety of foods from each of the main:	Plants	Food groups	Planets	Animals	○●○○
96. The suggested fluid intake is _____ glasses per day.	20–25	30	1–2	6–8	○○○●
97. Teenagers (aged 12 to 17) are advised to eat vegetables at least _____ servings.	10	1	3	15	○○●○
98. Teenagers (aged 12 to 17) are advised to eat fruits at least _____ servings.	1	12	2	8	○○●○

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Questions	A	B	C	D	A B C D
99. Teenagers are advised to take milk and alternatives _____ servings.	10	8	2	15	○○●○
100. Teenagers are advised to take meat, fish, egg and alternatives:	50 grams	1 kg	200–300 grams	2 kg	○○●○
101. Adults are advised to take meat, fish, egg and alternatives:	50 grams	1 kg	250–400 grams	2 kg	○○●○
102. Teenagers are advised to eat grains:	1 bowl	10 bowls	4–6 bowls	15 bowls	○○●○
103. Adults are advised to eat grains:	1 bowl	20 bowls	15 bowls	3–8 bowls	○○○●
104. Fat, oil, salt and sugar should be eaten:	Daily in large amounts	The most	Equally	The least	○○○●
105. Malnutrition develops when the body is deprived of vitamins, minerals and other:	Nutrients	Metals	Gases	Plastics	●○○○
106. Malnutrition occurs in people who are undernourished or:	Hungry only	Pure	Clean	Over nourished	○○○●
107. Marasmus is caused by insufficient levels of:	Nutrition	Sunlight	Water only	Air	●○○○
108. Marasmus is a severe deficiency of macronutrients including carbohydrates, proteins and:	Fats	Vitamins	Water	Minerals	●○○○
109. A high-calorie-density diet has a high risk of weight gain and:	Height	Obesity	Growth	Weight loss	○●○○
110. Low-calorie-density foods tend to provide less fat and more water and:	Salt	Fibre	Sugar	Oil	○●○○
111. Calorie density also affects:	Colour	Hunger	Taste only	Smell only	○●○○
112. Carbohydrates are the main energy source of the human:	Diet	Car	Bag	Fuel tank	●○○○
113. Lipids are organic compounds that are fatty acids or their:	Metals	Derivatives	Gases	Salts	○●○○
114. Lipids include natural oils, waxes and:	Sugars	Minerals	Steroids	Acids only	○○●○
115. Carbohydrates, proteins and lipids are collectively called:	Minerals	Gases	Metals	Biomolecules	○○○●

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Questions	A	B	C	D	A B C D
116. The biomolecule that provides energy for muscles and the brain is:	Nucleic acid	Carbohydrate	Water	Vitamin	○●○○
117. The biomolecule that serves as the main structural material of cells is:	Starch	Glucose	Water	Protein	○○○●
118. The biomolecule that stores genetic information is:	Lipid	Starch	Nucleic acid	Cellulose	○○●○
119. The biomolecule that forms the cell membrane is:	Glucose	Cellulose	Lipid	Starch	○○●○
120. The unit before Biochemistry in the book is:	Hydrocarbons	Stoichiometry	Organic Chemistry	Matter	●○○○
121. The unit after Biochemistry in the book is:	Stoichiometry	Hydrocarbons	Empirical Data Collection and Analysis	Matter	○○●○
122. Which food group provides the most carbohydrates?	Fish	Grains	Oil	Meat	○●○○
123. Which food provides high protein?	Sugar	Rice	Egg	Oil	○○●○
124. Which food provides high fat?	Apple	Butter	Sugar	Rice	○●○○
125. Which nutrient helps the body to build and repair tissues?	Proteins	Water only	Sugar	Salt only	●○○○
126. Which nutrient is the main source of energy for the body?	Vitamins	Water	Minerals	Carbohydrates	○○○●
127. Which biomolecule is made of amino acids?	Starch	Protein	DNA	Lipid	○●○○
128. Which biomolecule is made of nucleotides?	Protein	Lipid	Nucleic acid	Starch	○○●○
129. Which biomolecule is made of sugar units?	Nucleic acid	Protein	Carbohydrate	Lipid	○○●○
130. Which biomolecule is made of fatty acids?	Lipid	Starch	Protein	DNA	●○○○
131. The sugar in blood is:	Lactose	Maltose	Glucose	Sucrose	○○●○
132. The process that releases energy from glucose in cells is:	Photosynthesis	Excretion	Cellular respiration	Digestion only	○○●○

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Questions	A	B	C	D	A B C D
133. Which of these is a mineral needed for strong bones?	Nitrogen	Calcium	Hydrogen	Carbon	○●○○
134. Which of these is a mineral needed to make hemoglobin?	Sodium	Iodine	Calcium	Iron	○○○●
135. A diet lacking all macronutrients causes:	Scurvy	Anemia only	Marasmus	Obesity	○○●○
136. Which element is present in all proteins but absent in carbohydrates?	Nitrogen	Hydrogen	Carbon	Oxygen	●○○○
137. Amino acids contain the groups –NH_2 and:	–OH only	–COOH	–CHO	–Cl	○●○○
138. The bond that joins amino acids is a:	Ester bond	Peptide bond	Glycosidic bond	Hydrogen bond	○●○○
139. The bond that joins monosaccharides in disaccharides is the:	Peptide bond	Metallic bond	Glycosidic bond	Ionic bond	○○●○
140. Fats are esters of glycerol and:	Nucleotides	Fatty acids	Amino acids	Sugars	○●○○
141. Saturated fats are usually _____ at room temperature.	Gas	Blue	Solid	Plasma	○○●○
142. Unsaturated oils are usually _____ at room temperature.	Plasma	Liquid	Solid	Gas	○●○○
143. A food rich in vitamin C is:	Butter	Bread	Citrus fruit	Rice	○○●○
144. Which nutrient helps the body to fight infections?	Proteins	Salt	Sugar	Starch	●○○○
145. Daily intake of fluid for teenagers is about:	1 glass	20 glasses	30 glasses	6–8 glasses	○○○●
146. Which of these is a polysaccharide found in plants?	Fructose	Glucose	Sucrose	Starch	○○○●
147. RNA differs from DNA in being:	Single stranded	Larger	Metallic	Double stranded	●○○○
148. Biochemistry combines the study of living matter with:	Physics only	Chemistry	Geology	Astronomy	○●○○
149. Energy from foods is measured in:	Kilograms	Litres	Kilocalories	Metres	○○●○

Questions	A	B	C	D	A B C D
150. Which nutrient yields 4 kilocalories per gram along with carbohydrate?	Vitamin	Water	Protein	Lipid	○○●○

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