## MULTIPLE CHOICE

1.	Which element is N A. carbon – C B. potassium – P C. nitrogen – N D. cobalt – Co	IOT pa	ired with its c	orrect	symbol?
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1
2.	Which element is N A. sodium – S B. oxygen – O C. magnesium – M D. chlorine – Cl	IOT pa Ig	ired with its c	orrect	symbol?
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1
3.	Which element is N A. hydrogen – H B. sulfur – S C. calcium – Ca D. iron – I	IOT pa	ired with its c	orrect	symbol?
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1
4.	For sodium, sulfur, A. S, Su, Z, Cl B. Na, S, Zn, Cl C. No, Su, Z, C D. Na, S, Z, Cl	zinc, a	nd chlorine, tl	he corr	ect chemical symbols, in order, are:
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1
5.	For iron, iodine, po A. I, Io, P, Ph B. Fe, I, P, Ph C. I, Io, K, P D. Fe, I, K, P	tassiun	n, and phosph	orus, tl	he correct chemical symbols, in order, are:
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1
6.	<ul><li>For cobalt, copper,</li><li>A. Cb, Co, Ca, C</li><li>B. Co, Cp, Ca, Cr</li><li>C. Cb, Cu, Cm, C</li><li>D. Co, Cu, Ca, C</li></ul>	calciur	n, and carbon	, the co	orrect chemical symbols, in order, are:
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 1

- 7. An ionic bond is formed when:
  - A. an atom of sodium loses an electron to another atom of sodium
  - B. an atom of sodium shares two electrons with two atoms of chlorine
  - C. an atom of sodium gains an electron from an atom of chlorine
  - D. an atom of sodium loses an electron to an atom of chlorine

ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

- 8. Which statement is NOT true of ions?
  - A. An ion has either a positive or negative charge.
  - B. Atoms become ions by gaining or losing protons.
  - C. Ions with unlike charges are attracted to one another and form ionic bonds.
  - D. An atom that loses an electron will have a charge of +1.

ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

- 9. An atom that has gained an electron is called:
  - A. an ion that is neutral
  - B. an ion with a charge of +1
  - C. an ion with a charge of -1
  - D. an atom with a charge of +1

PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

10. A cation has:

ANS: C

- A. a positive charge
- B. a negative charge
- C. a neutral charge
- D. none of these, because the charge may vary

ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

- 11. An anion has:
  - A. a positive charge
  - B. a negative charge
  - C. a neutral charge
  - D. none of these, because the charge may vary

ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

- 12. A cation has:
  - A. a positive charge, and an example is a chloride ion
  - B. a negative charge, and an example is a potassium ion
  - C. a positive charge, and an example is a calcium ion
  - D. a negative charge, and an example is an iron ion

ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 2

- 13. An anion has:
  - A. a positive charge, and an example is a hydrogen ion
  - B. a negative charge, and an example is a bicarbonate ion
  - C. a positive charge, and an example is a chloride ion
  - D. a negative charge, and an example is a sodium ion

	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
14.	<ul><li>Which statement is</li><li>A. They form salts</li><li>B. In the solid state</li><li>C. In water, many</li><li>D. They involve the</li></ul>	NOT e, they ionic b ionic b	true of ionic b are very stror oonds weaken ing of electror	onds? ng. ns.	
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
15.	The term <i>dissociati</i> A. ionic bonds B. the breaking of C. both A and B D. both A and B and	<i>on</i> refe bonds nd cov	ers to: in a water sol alent bonds	ution	
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
16.	<ul><li>A synonym for diss</li><li>A. decomposition</li><li>B. ionization</li><li>C. synthesis</li><li>D. reformulation</li></ul>	sociatio	on is:		
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
17.	Dissociation of salt A. free ions to take B. produce energy C. keep salt molec D. keep salt molec	s is im e part i ules st ules st	portant to: n other reactio able in water able as solids	ons	
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
18.	Ionization of salts s A. when the tempe B. when the tempe C. in the solid state D. in water	such as erature erature e	sodium chlor rises falls	ide tak	es place:
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 2
19.	A covalent bond is A. two or more ato B. two atoms form C. one atom loses D. a carbon atom l	formed oms sha i ions a two ele oses al	d when: are electrons and are attracte ectrons that ar 1 of its electro	ed to ea e gaine ns to o	ach other ed by another atom ther atoms
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
20.	A bond in which el	ectrons	s are shared be	etween	atoms is:

A. ionic

	<ul><li>B. reciprocal</li><li>C. covalent</li><li>D. di-electron</li></ul>		DEE	
	ANS: C	PIS: 1	KEF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
21.	<ul> <li>An atom of carbon 2</li> <li>A. 2/ionic</li> <li>B. 4/covalent</li> <li>C. 2/covalent</li> <li>D. 4/ionic</li> </ul>	has electrons to	o share	to form bonds.
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
22.	<ul><li>Which statement is</li><li>A. These bonds are</li><li>B. A molecule of v</li><li>C. These bonds inv</li><li>D. The atoms of m</li></ul>	NOT true of covaler e not weakened when water is formed by co volve the sharing of ost inorganic molect	nt bond n in wa ovalent electro iles are	ls? ter. bonds. ns. bonded by covalent bonds.
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
23.	The bonds that help A. covalent bonds B. hydrogen bonds C. ionic bonds D. water bonds	o maintain the three-o	dimens	ional shape of proteins and nucleic acids are:
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
24.	The bonds that mak A. disulfide bonds B. hydrogen bonds C. ionic bonds D. water bonds	te water cohesive are	:	
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
25.	The bonds that hold A. disulfide bonds B. peptide bonds C. ionic bonds D. Protein bonds	l the two chains of a	n insul	in molecule together are:
	ANS: A	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3
26.	Disulfide bonds ma A. some starches B. some proteins C. DNA and RNA D. true fats	y be part of:		
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 3

27.	<ul><li>Large molecules of glycogen are made of the smaller subunits called:</li><li>A. glucose</li><li>B. fatty acids and glycerol</li><li>C. amino acids</li><li>D. nucleotides</li></ul>	
	ANS: APTS: 1REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
28.	<ul> <li>Glucose molecules are the subunits of:</li> <li>A. starch</li> <li>B. glycogen</li> <li>C. both A and B</li> <li>D. both A and B and cellulose</li> </ul>	
	ANS: DPTS: 1REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
29.	<ul> <li>Glycogen and starch are that are made of</li> <li>A. disaccharides/sucrose</li> <li>B. polysaccharides/glucose</li> <li>C. disaccharides/glucose</li> <li>D. polysaccharides/sucrose</li> </ul>	
	ANS: BPTS: 1REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
30.	<ul> <li>Glucose is a molecule that is:</li> <li>A. a hexose sugar</li> <li>B. a monosaccharide</li> <li>C. both A and B</li> <li>D. both A and B and inorganic</li> </ul>	
	ANS: CPTS: 1REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
31.	<ul> <li>Glucose is a molecule that is a:</li> <li>A. double sugar</li> <li>B. hexose sugar</li> <li>C. pentose sugar</li> <li>D. triple sugar</li> </ul>	
	ANS: BPTS: 1REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
32.	The chemical formula for glucose is: A. $C_{12}H_6O_{12}$ B. $C_{12}H_6O_6$ C. $C_6H_6O_6$ D. $C_6H_{12}O_6$ ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry   Rev Ques:	4
33.	<ul><li>Glucose, fructose, and galactose are:</li><li>A. hexose sugars</li><li>B. monosaccharides</li></ul>	

C. both A and B

	D. both A and B,	and all have the same	e chem	ical formula
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
34.	Large molecules of A. fatty acids and B. fatty acids and C. amino acids D. nucleotides	f true fats are made o glucose glycerol	of the si	naller subunits called:
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
35.	<ul><li>Fatty acids and gly</li><li>A. phospholipids</li><li>B. true fats</li><li>C. both A and B</li><li>D. both A and B a</li></ul>	cerol are the subunit	s of:	
	ANS: C	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
36.	Large molecules of A. glucose B. fatty acids and C. amino acids D. nucleotides	f protein are made of glycerol	f the sm	aller subunits called:
	ANS: C	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
37.	<ul><li>Which statement is</li><li>A. They all contai</li><li>B. They are the su</li><li>C. A chain of ami</li><li>D. There are about</li></ul>	s NOT true of amino n the elements C, H, ıbunits of proteins. no acids is linked by t 20 different amino	acids? O, and ionic t acids in	N. Donds. n human proteins.
	ANS: C	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
38.	Large molecules of A. glucose B. fatty acids and C. amino acids D. nucleotides	f DNA and RNA are glycerol	made (	of the smaller subunits called:
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
39.	<ul><li>Which statement is</li><li>A. Glycogen is ma</li><li>B. Glycerol is fou</li><li>C. DNA subunits</li><li>D. The subunits of</li></ul>	NOT true of the sub ade of glucose. nd in true fats and in are called deoxyprec f enzymes are amino	ounits of diglyc cursors.	of organic molecules? erides.
	ANS: C	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
40.	Which statement is	s NOT true of saturat	ted fats	?

	<ul><li>A. Most are plant</li><li>B. They have the</li><li>C. They have sing</li><li>D. They have been</li></ul>	oils. maximu gle bond n implic	um number of ls between car cated in heart o	hydrog bons. disease	gen atoms.
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
41.	<ul><li>Which statement is</li><li>A. They have one</li><li>B. They have the</li><li>C. Most are plant</li><li>D. They are made</li></ul>	s NOT t or more maximu oils. of fatty	rue of unsatur e double bond im number of acids and gly	rated fa s betw hydrog vcerol.	tts? een carbons. gen atoms.
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 4
42.	The fluid found wi A. lymph B. plasma C. intracellular flu D. tissue fluid	thin lyr 1id	nph vessels is	called	:
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
43.	Lymph is a fluid th A. lymph vessels B. tissue spaces C. both A and B D. both A and B a	nat is fo and betw	und in: veen cells		
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
44.	The fluid found wi A. lymph B. plasma C. intracellular flu D. tissue fluid	thin vei 11d	ns is called:		
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
45.	<ul><li>Plasma is a fluid th</li><li>A. veins</li><li>B. arteries</li><li>C. both A and B</li><li>D. both A and B a</li></ul>	nat is fo and in ca	und in: apillaries		
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
46.	The fluid found wi A. intercellular flu B. plasma C. intracellular flu D. extracellular flu	ithin cel uid uid uid	ls is called:		

	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
47.	Intracellular fluid is A. within cells B. between cells C. both A and B D. both A and B and	s found nd in ti	: ssue spaces		
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
48.	The fluid found in s A. lymph B. plasma C. intracellular flu D. tissue fluid	spaces i	between cells	is call	ed:
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
49.	The fluid found in a A. tissue fluid B. intercellular flu C. both A and B D. both A and B and	spaces id id nd lymj	between cells ph	is call	ed:
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
50.	Intercellular fluid is A. within cells B. between cells C. both A and B D. both A and B and	s found nd arou	: ind cells		
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 5
51.	The fact that water A. digestion of foc B. pumping of the C. keeping a fairly D. nerve impulse t	change od heart consta ransmi	es temperature ant body temp ssion	e slowl <u>y</u> erature	y is important for:
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 6
52.	Water can absorb a A. sweating to lose B. digestion of ver C. nerve impulse t D. production of R	great c e exces y large ransmi BCs	leal of heat, as s body heat meals ssion	nd this	is important for:
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 6
53.	The process of swe	ating d	epends upon v	water a	s a:

- A. solvent
- B. lubricant

	<ul><li>C. transporter</li><li>D. heat absorber</li></ul>				
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 6
54.	The sense of taste of A. solvent B. lubricant C. transporter D. heat absorber	depends	s upon water a	as a:	
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 7
55.	The excretion of w A. solvent B. lubricant C. cushion D. heat absorber	aste pro	oducts in urine	e deper	nds upon water as a:
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 7
56.	<ul><li>Which of these is N</li><li>A. the senses of sr</li><li>B. synovial fluid i</li><li>C. transport of nut</li><li>D. excretion of was</li></ul>	NOT an nell and n joints trients i aste pro	example of th taste n the blood ducts in urine	he imp	ortance of water as a solvent?
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 7
57.	Swallowing depend A. solvent B. lubricant C. cushion D. heat absorber	ds upon	water as a:		
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 7
58.	<ul><li>Which of these is a</li><li>A. the senses of sr</li><li>B. synovial fluid i</li><li>C. transport of nut</li><li>D. excretion of wa</li></ul>	n exam nell and n joints trients i aste pro	ple of the lub l taste n the blood ducts in urine	ricant 1	function of water?
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 7
59.	The storage form for A. glycogen B. true fats C. pentose sugars D. oligosaccharide	or gluco es	ose in the live	r is:	
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8

60.	<ul><li>The storage form for</li><li>A. glycogen</li><li>B. true fats</li><li>C. pentose sugars</li><li>D. oligosaccharide</li></ul>	or energy in adipose s	tissue i	s:
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
61.	<ul><li>The carbohydrates</li><li>A. glucose</li><li>B. starch</li><li>C. pentose sugars</li><li>D. oligosaccharide</li></ul>	that are part of DNA s	and R	NA are:
	ANS: C	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
62.	The pentose sugars A. starches B. DNA and RNA C. specialized enzy D. cell membranes	are part of: ymes		
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
63.	<ul><li>The self antigens of A. starch</li><li>B. pentose sugars</li><li>C. glucose</li><li>D. oligosaccharide</li></ul>	n cell membranes are s	:	
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
64.	The oligosaccharide A. DNA and RNA B. certain enzymes C. structural protei D. cell membranes	es are attached to: as part of the genetic s as part of the active ins to provide stabilit as self antigens	c code e site ty	
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
65.	The disaccharides a A. will be digested B. will become par C. will be digested D. are part of species	re sugars that: and used for energy rt of DNA and RNA for energy, such as ialized enzymes	r, such fructos	as sucrose e
	ANS: A	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
66.	<ul><li>Which of these is N</li><li>A. sucrose</li><li>B. galactose</li><li>C. maltose</li><li>D. lactose</li></ul>	IOT a disaccharide?		

	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
67.	Disaccharides in the A. energy B. amino acids C. proteins D. cell membranes	e diet a	re digested ar	id used	for:
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
68.	Sucrose and lactose A. monosaccharide B. disaccharides C. oligosaccharides D. polysaccharides	e are: es s			
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
69.	The precursor mole A. cholesterol B. cellulose C. phospholipids D. enzymes	cule fo	or steroid horn	nones i	s:
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
70.	<ul><li>Cholesterol is imported.</li><li>A. synthesis of ster</li><li>B. production of v.</li><li>C. both A and B</li><li>D. both A and B and B</li></ul>	ortant fo roid ho itamin nd as p	or the: rmones D art of cell mer	nbrane	s
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
71.	<ul><li>Vitamin D may be</li><li>A. amino acids</li><li>B. phospholipids</li><li>C. cholesterol</li><li>D. disaccharides</li></ul>	synthe	sized in the bo	ody fro	m:
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
72.	The undigested par A. cholesterol B. cellulose C. true fats D. proteins	t of foc	od that promot	es peri	stalsis is:
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8

73. For people, the function of cellulose is to promote:A. energy production between meals

	<ul><li>B. peristalsis</li><li>C. loss of heat in h</li><li>D. retention of heat</li></ul>	ot wea it in col	ther ld weather		
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
74.	The genetic materia A. enzymes B. RNA C. DNA D. phospholipids	ıl (geno	etic code) with	hin cell	lls is:
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
75.	The function of DN A. be the genetic c B. serve as the site C. both A and B D. both A and B and	IA is to ode wi of pro nd form	o: ithin cells otein synthesis n chromosome	es	
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
76.	<ul><li>The function of RN</li><li>A. protein synthesis</li><li>B. cell respiration</li><li>C. to help synthesis</li><li>D. to help synthesis</li></ul>	A is: is ze DN ze AT	A P		
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
77.	RNA is different fr A. RNA is a single B. RNA has the ba C. both A and B D. neither A nor B	om DN e stranc ise urac	VA in that: l of amino aci cil where DNA	ds A has tl	thymine
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
78.	The catalysts of cel A. phospholipids B. nucleic acids C. hexose sugars D. enzymes	lular re	eactions are:		
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8
79.	<ul><li>Within the body, pr</li><li>A. enzymes</li><li>B. hormones</li><li>C. structural comp</li><li>D. all of these</li></ul>	oteins	may be: of tissues		
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 8

80. Which organic molecule is NOT part of cell membranes? A. glucose B. protein C. phospholipid D. cholesterol ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 8 81. Which of the following are energy-storage molecules? A. glucose and proteins B. glycogen and true fats C. proteins and glycogen D. true fats and amino acids ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 8 82. Which statement is NOT true of organic molecules? A. DNA is the genetic code in chromosomes. B. Hormones may be steroids or proteins. C. Phospholipids are part of cell membranes. D. Oligosaccharides are energy-storage molecules. PTS: 1 ANS: D REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 8 83. Which statement is NOT true of organic molecules? A. RNA is important for protein synthesis. B. Cholesterol is part of cell membranes. C. Glucose is the most important pentose sugar. D. All enzymes are proteins. ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 8 84. The raw materials, or reactants, of cell respiration are: A. glucose and oxygen B. water and glucose C. oxygen and carbon dioxide D. carbon dioxide and glucose ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 9 85. Which of these is NOT a product of cell respiration? A. water B. carbon dioxide C. ATP D. oxygen PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 9 ANS: D 86. The purpose of cell respiration is to produce: A. ATP from water

- B. ATP from glucose
- C. carbon dioxide from ATP

	D. water from AT	Р	
	ANS: B	PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 9
87.	The waste product A. carbon dioxide B. water C. ATP D. heat	of cell respiration is:	
	ANS: A	PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10
88.	<ul><li>Biologically useful</li><li>A. light</li><li>B. heat</li><li>C. ATP</li><li>D. movement</li></ul>	energy is released in	n cell respiration in the form of:
	ANS: C	PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10
89.	Cell respiration ena A. water B. glucose C. oxygen D. minerals	bles our cells to rele	ase the potential energy found in molecules of:
	ANS: B	PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10
90.	In cell respiration, A. carbon dioxide B. water C. hydrogen D. oxygen	the breakdown of glu	acose to form ATP must take place in the presence of:
90.	In cell respiration, A. carbon dioxide B. water C. hydrogen D. oxygen ANS: D	the breakdown of glu PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10
90. 91.	In cell respiration, f A. carbon dioxide B. water C. hydrogen D. oxygen ANS: D If too much carbon A. the pH will dec B. cell membranes C. the pH will incr D. cell membranes	the breakdown of glu PTS: 1 dioxide accumulates rease s will rupture rease s will shrivel	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10 s in cells and tissues:
90.	In cell respiration, f A. carbon dioxide B. water C. hydrogen D. oxygen ANS: D If too much carbon A. the pH will dec B. cell membranes C. the pH will incr D. cell membranes ANS: A	the breakdown of glu PTS: 1 dioxide accumulates rease s will rupture rease s will shrivel PTS: 1	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10 s in cells and tissues: REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10
90. 91. 92.	In cell respiration, A. carbon dioxide B. water C. hydrogen D. oxygen ANS: D If too much carbon A. the pH will dec B. cell membranes C. the pH will incr D. cell membranes ANS: A Which statement is A. It is the link bet B. The water prod C. One of the ener D. ATP is biologic	the breakdown of glu PTS: 1 dioxide accumulates rease s will rupture rease s will shrivel PTS: 1 NOT true of cell res tween eating and bre uced must be excrete gy products is heat. cally useful energy.	REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10 s in cells and tissues: REF: Chapter 2 – Some Basic Chemistry   Rev Ques: 10 spiration? athing. ed or the cell will burst.

93. The element that carries oxygen in red blood cells is:

	<ul><li>A. iron</li><li>B. calcium</li><li>C. iodine</li><li>D. cobalt</li></ul>			
	ANS: A	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 11
94.	The element that p A. iron B. calcium C. zinc D. iodine	rovides strength in bo	ones ar	nd teeth is:
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 11
95.	Two elements that A. iron and calciu B. calcium and po C. sodium and pho D. calcium and pho	provide strength in b m otassium osphorus osphorus	oones a	nd teeth are:
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 11
96.	The element that is A. calcium B. cobalt C. iodine D. sodium ANS: C	part of the hormone	thyrox REF:	chapter 2 – Some Basic Chemistry   Rey Ques: 11
97.	<ul><li>The element iodine</li><li>A. insulin</li><li>B. thyroxine</li><li>C. estrogen</li><li>D. growth hormor</li></ul>	e is an essential part on the second se	of the h	normone:
	ANS: B	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 11
98.	The element that is A. sodium B. copper C. calcium D. cobalt	s part of vitamin $B_{12}$ i	is:	
	ANS: D	PTS: 1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 11
99.	The element cobalt A. C B. D C. B <sub>6</sub> D. B <sub>12</sub>	t is an essential part o	of vitar	nin:

REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 ANS: D PTS: 1 100. Two elements that are necessary for nerve impulse transmission are: A. sodium and potassium B. iron and copper C. calcium and phosphorus D. sulfur and cobalt ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 101. The element that is necessary for blood clotting is: A. sulfur B. calcium C. copper D. potassium ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 102. The element that is part of some amino acids and forms bonds in proteins is: A. sulfur B. calcium C. copper D. potassium ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 103. Two elements that are necessary for cell respiration are: A. sodium and potassium B. calcium and phosphorus C. iodine and sulfur D. iron and copper ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 104. All organic molecules contain the elements: A. C, H, and N B. C, H, and O C. C, O, and N D. H, O, and N ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 105. A large organic molecule made of the elements C, H, O, N, and P would most likely be a: A. nucleic acid B. polysaccharide C. protein D. true fat ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11 106. A large organic molecule made of the elements C, H, O, N, and S would most likely be a:

- A. nucleic acid
- B. polysaccharide

- C. protein
- D. true fat

ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11

- 107. Which statement is NOT true of the elements in the human body?
  - A. Iron is part of hemoglobin.
  - B. The hormone thyroxine contains copper.
  - C. Sodium is needed for nerve-impulse transmission.
  - D. Phosphorus is part of bones and teeth.

ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11

108. Which statement is NOT true of the elements in the human body?

- A. Calcium is necessary for blood clotting.
- B. Potassium is needed for nerve-impulse transmission.
- C. Sulfur is part of some carbohydrates.
- D. Vitamin  $B_{12}$  contains cobalt.

ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 11

109. A solution that has more hydrogen ions than hydroxyl ions is:

- A. a base
- B. an acid
- C. neutral
- D. none of these

ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12

110. An acid solution has:

- A. more hydroxyl ions than hydrogen ions
- B. more hydroxyl ions than water ions
- C. more hydrogen ions than water ions
- D. more hydrogen ions than hydroxyl ions

ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12

- 111. A solution that has more hydroxyl ions than hydrogen ions is:
  - A. neutral
  - B. a base
  - C. an acid
  - D. none of these

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ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12
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- 112. An alkaline (basic) solution has:
  - A. more hydroxyl ions than hydrogen ions
  - B. more hydroxyl ions than water ions
  - C. more hydrogen ions than water ions
  - D. more hydrogen ions than hydroxyl ions

ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12

113. A solution that has equal numbers of hydrogen and hydroxyl ions is: A. neutral B. a base C. an acid D. none of these ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 114. On the pH scale, acids are indicated by numbers: A. above 10 B. below 10 C. above 7 D. below 7 ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 115. On the pH scale, bases are indicated by numbers: A. below 4 B. below 7 C. above 4 D. above 7 ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 116. A solution with a pH of 7.5 would be: A. slightly acidic B. strongly acidic C. slightly alkaline D. strongly alkaline ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 117. A solution with a pH of 2.5 would be: A. slightly acidic B. strongly acidic C. slightly alkaline D. strongly alkaline ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 118. Which statement is NOT true of the pH scale? A. It ranges from 0 through 14. B. It is a measure of the hydrogen and hydroxyl ions in a solution. C. The more hydrogen ions present, the higher the pH. D. A pH of 7 is considered neutral. ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 12 119. Which statement is NOT true of pH and human body fluids? A. Blood has a very narrow normal pH range. B. Gastric juice may have a pH of 2. C. The pH of urine may be acidic or alkaline and still be in the normal range.

D. The normal pH range of intestinal secretions is acidic.

	ANS: D	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 12	
120.	The normal pH range of blood is, which is A. 6.75–6.95/slightly acidic B. 7.35–7.45/slightly alkaline C. 7.10–7.20/slightly alkaline D. 6.90–7.15/neutral					
	ANS: B	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 13	
121.	<ul><li>Which pH would NOT be in the normal range for human blood?</li><li>A. 7.30</li><li>B. 7.39</li><li>C. 7.40</li><li>D. All of these are within the normal range.</li></ul>					
	ANS: A	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 13	
122.	<ul> <li>A blood pH of 7.36 is:</li> <li>A. slightly alkaline and in the normal range</li> <li>B. slightly acidic and in the normal range</li> <li>C. slightly alkaline and too high for the normal range</li> <li>D. slightly acidic and too low for the normal range</li> </ul>					
	ANS: A	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 13	
123.	<ul> <li>A blood pH of 7.44 is:</li> <li>A. slightly alkaline and in the normal range</li> <li>B. slightly acidic and in the normal range</li> <li>C. slightly alkaline and too high for the normal range</li> <li>D. slightly acidic and too low for the normal range</li> </ul>					
	ANS: A	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 13	
124.	<ul> <li>The purpose of a buffer system is to:</li> <li>A. maintain a normal growth rate</li> <li>B. ensure proper digestion</li> <li>C. prevent drastic changes in pH</li> <li>D. speed up nerve impulses</li> </ul>					
	ANS: C	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 14	
125.	<ul> <li>When the bicarbonate buffer system buffers the strong acid HCl:</li> <li>A. carbonic acid is formed, which only slightly lowers pH</li> <li>B. sodium chloride is formed, which raises pH</li> <li>C. water is formed, which lowers pH</li> <li>D. sodium chloride is formed, which lowers pH</li> </ul>					
	ANS: A	PTS: 1	REF:	Chapter 2 -	- Some Basic Chemistry   Rev Ques: 14	

126. Salts are molecules that when in solution will:A. have no effect on pH

	<ul><li>B. only slightly lower pH</li><li>C. only slightly raise pH</li><li>D. all of these, depending on the particular salt</li></ul>					
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 14	
127.	<ul><li>When a buffer system forms a weak acid from a strong acid:</li><li>A. the pH is lowered only slightly, instead of greatly</li><li>B. the pH is raised only slightly, instead of greatly</li><li>C. the pH is raised only slightly, because more hydrogen ions are produced</li><li>D. all of these are possible, depending on the particular reaction</li></ul>					
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 14	
128.	If body fluids are b A. sodium B. potassium C. hydroxyl D. hydrogen	ecomir	ng too acidic,	this me	ans that there are excess ions in the fluid.	
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 14	
129.	If the body fluids at the fluid. A. sodium B. potassium C. hydroxyl D. hydrogen	re becc	oming too alka	aline, th	is means that there are not enough ions in	
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 14	
130.	The product of cell A. water B. carbon dioxide C. oxygen D. ATP	respira	ation that will	cause	acidosis if present in excess is:	
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 14	
131.	<ul><li>All enzymes are:</li><li>A. carbohydrates</li><li>B. lipids</li><li>C. proteins</li><li>D. steroids</li></ul>					
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 15	
132.	The active site of an A. is the part wher B. has a particular C. both A and B	n enzy e the st and sp	me: ubstrate molec ecific shape	cules fi	t	

D. both A and B and it changes when other reactions are needed

ANS: C PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

133. Which statement is NOT true of the active site theory of enzyme functioning?
A. An enzyme may catalyze many different kinds of reactions.
B. It depends on the shapes of the enzyme and the substrate molecules.
C. An enzyme remains unchanged when the reaction is complete.
D. An enzyme catalyzes only one type of reaction.

ANS: A PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

- 134. The purpose of enzyme catalysts is to:
  - A. slow down reactions
  - B. transmit electrical nerve impulses
  - C. speed up reactions by adding heat
  - D. speed up reactions without the addition of heat

ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

135. Heat may disrupt the functioning of an enzyme because:

- A. human enzymes function only at 98.6 degrees F
- B. heat can break peptide bonds
- C. heat molecules are attracted to the enzyme and denature it
- D. heat can break hydrogen bonds and denature the enzyme

ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

- 136. A heavy-metal ion may disrupt the functioning of an enzyme because:
  - A. substrates bond to the metal ion
  - B. a metal ion may change the shape of the active site
  - C. metal ions raise the pH of cellular fluid
  - D. metal ions displace enzymes in intracellular fluid

ANS: B PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

- 137. A decrease in pH may disrupt the functioning of an enzyme because:
  - A. the enzyme must help out the bicarbonate buffer system
  - B. the active site becomes clogged with excess water
  - C. the substrate fits into the active site but cannot get out
  - D. excess hydrogen ions may block the active site

ANS: D PTS: 1 REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 15

- 138. A synthesis reaction involves:
  - A. the formation of bonds
  - B. the breaking of bonds
  - C. the release of energy
  - D. the creation of smaller molecules

ANS: A PTS: 1

REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 16

- 139. A decomposition reaction involves:
  - A. the creation of large molecules
  - B. the formation of bonds

	<ul><li>C. the need for energy to create bonds</li><li>D. the breaking of bonds</li></ul>					
	ANS: D	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 16	
140.	<ul><li>A reaction in whic</li><li>A. synthesis react</li><li>B. catalytic reacti</li><li>C. decomposition</li><li>D. debonding read</li></ul>	h the bo ion on reactio ction	onds of a large	e molec	rule are broken is called a:	
	ANS: C	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 16	
141.	<ul><li>A reaction in whic</li><li>A. composition re</li><li>B. synthesis react</li><li>C. thesis reaction</li><li>D. decomposition</li></ul>	h small eaction ion reactio	er molecules a n	are bon	ded to form larger ones is called a:	
	ANS: B	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 16	
142.	<ul> <li>The type of reaction more likely to release energy is a:</li> <li>A. decomposition reaction</li> <li>B. composition reaction</li> <li>C. synthesis reaction</li> <li>D. thesis reaction</li> </ul>					
	ANS: A	PTS:	1	REF:	Chapter 2 – Some Basic Chemistry   Rev Ques: 16	
143.	<ul><li>With respect to the</li><li>A. synthesis react</li><li>B. decomposition</li><li>C. thesis reaction</li><li>D. antithesis react</li></ul>	e glucos ion reactio ion	e molecule in n	volved	, cell respiration is a(n):	

ANS: B PTS: 1

REF: Chapter 2 – Some Basic Chemistry | Rev Ques: 16