Name:	Class:		Date:	ID: A
Fall Mid	term Practice Test-Fall 201	7		
hand.	need your own calculator and pe			you will do the math by
	l to start studying early. is 15% of your grade!			
	Match each item with the correct a. mixture	d.	reactant	
	b. productc. phase	e. f.	heterogeneous mixture vapor	
	gaseous state of substance that is a physical blend of two or more of not uniform in composition a substance formed in a chemical starting substance in a chemical n	reaction	room temperature	
	Match each item with the correct a. mass number b. atomic mass unit c. atomic number	d. e.	atomic mass isotope	
9.		neutrons in the nucleus of an element ses of the isotopes	leus of an atom of an element	cleus of an atom
	Match each item with the correcta. atomic orbitalb. aufbau principlec. electron configuration	t statement below. d. e. f.	ground state Pauli exclusion principle Heisenberg uncertainty princip	le
12. 13. 14. 15.	lowest energy level tendency of electrons to enter orb arrangement of electrons around	ng both velocity ar pitals of lowest ene atomic nucleus		t the same time
16.	each orbital has at most two elect	trons		

Name:	ID: A

Multiple Choice

Identify the choice that best completes the statement or answers the question.

 17.	A theory is a		
	a. proposed explanation for an observa	ation	
	b. well-tested explanation for a broad s	set of obser	vations
	c. summary of the results of many obse	ervations	
	d. procedure used to test a proposed ex	xplanation	
 18.	The variable that is observed during an e	experiment	
	a. independent	c.	controlling
	b. manipulated	d.	responding
 19.	Which of the following is NOT an exam	ple of matt	er?
	a. air	c.	smoke
	b. heat	d.	water vapor
 20.	An example of an extensive property of	matter is _	·
	a. temperature	c.	mass
	b. pressure	d.	hardness
21.	All of the following are physical properts	ies of matte	er EXCEPT .
 	a. mass	с.	melting point
	b. color	d.	ability to rust
22.	Which of the following is a physical char		•
	a. corrosion	c.	evaporation
	b. explosion	d.	rotting of food
23.			· ·
	a. table salt	c.	nitrogen
	b. air	d.	gold
24.	Which of the following is a homogeneou	ıs mixture?	
	a. salt water	c.	sand and water
	b. beef stew	d.	soil
25.	Separating a solid from a liquid by evapo	orating the	liquid is called .
	a. filtration	c.	- · · · · · · · · · · · · · · · · · · ·
	b. condensation	d.	distillation
 26.	Which of the following processes does N	NOT involv	e a change in chemical properties?
	a. rusting	c.	boiling
	b. fermenting	d.	burning
 27.	A chemical change occurs when a piece	of wood	<u></u> .
	a. is split	c.	decays
	b. is painted	d.	is cut
 28.	Which of the following is a chemical pro-	perty of wa	ater at 4°C?
	a. its color		
	b. its state		
	c. its temperature		
	d. its ability to decompose into hydrog	en and oxy	gen

 29.	Which of the following indicates that a chemical change has happened during cooking?
	a. The food darkens.
	b. Bubbles form in boiling water.
	c. Butter melts.
	d. Energy is transferred from the stove to a pan.
 30.	Which of the following does NOT indicate that a chemical change may have taken place?
	a. fracture formation c. precipitate formation
	b. gas production d. energy transfer
 31.	The smallest particle of an element that retains the properties of that element is a(n)
	a. atom c. proton
	b. electron d. neutron
 32.	Dalton's atomic theory included which idea?
	a. All atoms of all elements are the same size.
	b. Atoms of different elements always combine in one-to-one ratios.
	c. Atoms of the same element are always identical.
2.2	d. Individual atoms can be seen with a microscope.
 33.	Why did J. J. Thomson reason that electrons must be a part of the atoms of all elements?
	a. Cathode rays are negatively-charged particles.
	b. Cathode rays can be deflected by magnets.
	c. An electron is 2000 times lighter than a hydrogen atom.d. Charge-to-mass ratio of electrons was the same, regardless of the gas used.
2.4	
 34.	
	a. positively charged, with the number of protons exceeding the number of electronsb. negatively charged, with the number of electrons exceeding the number of protons
	c. neutral, with the number of protons equaling the number of electrons
	d. neutral, with the number of protons equaling the number of electrons, which is equal to
	the number of neutrons
35.	As a consequence of the discovery of the nucleus by Rutherford, which model of the atom is thought to b
	true?
	a. Protons, electrons, and neutrons are evenly distributed throughout the volume of the
	atom.
	b. The nucleus is made of protons, electrons, and neutrons.
	c. Electrons are distributed around the nucleus and occupy almost all the volume of the
	atom.
	d. The nucleus is made of electrons and protons.
 36.	The nucleus of an atom is
	a. the central core and is composed of protons and neutrons
	b. positively charged and has more protons than neutrons
	c. negatively charged and has a high density
	d. negatively charged and has a low density
 37.	What does the number 84 in the name krypton-84 represent?
	a. the atomic number c. the sum of the protons and electrons
	b. the mass number d. twice the number of protons
 38.	· ——
	a. positions on the periodic table c. atomic numbers
	b. chemical behavior d. mass numbers

Name: _____

ID: A

Name:		

 39.	In which of the following sets is the symbol of electrons given correctly?	the e	element, the number of protons, and the number of
	a. In, 49 protons, 49 electronsb. Zn, 30 protons, 60 electrons	c. d.	Cs, 55 protons, 132.9 electrons F, 19 protons, 19 electrons
 40.	Using the periodic table, determine the number	of n	eutrons in ¹⁶ O.
	a. 4 b. 8	c.	16
<i>1</i> 1		d.	24 - 3+ ion 2
 41.	Which of the following compounds contains th a. MnS	c.	Mn_2O_3
	b. MnBr ₂	d.	MnO
 42.	Which of the following formulas represents an		
	a. CS ₂		N_2O_4
	b. BaI ₂		PCl ₃
 43.	Which of the following correctly represents an	_	•
	a. Ca^{2-} , F^- ; CaF_2	c.	Ba^{2+} , O^{2-} ; $\mathrm{Ba}_{2}\mathrm{O}_{2}$
	b. Na ⁺ , Cl ⁻ ; NaCl ₂	d.	Pb ⁴⁺ , O ²⁻ ; Pb ₂ O ₄
 44.	Which set of chemical name and chemical form a. $iron(II)$ oxide, Fe_2O_3	nula c.	for the same compound is correct? tin(IV) bromide, SnBr ₄
	b. aluminum fluorate, AlF ₃	d.	potassium chloride, K ₂ Cl ₂
 45.	What is the correct formula for potassium sulfi a. KHSO ₃	te? c.	K_2SO_3
	b. KHSO ₄		K_2SO_3 K_2SO_4
46.	Which set of chemical name and chemical form		
 7 0.	a. ammonium sulfite, $(NH_4)_2S$	c.	lithium carbonate, LiCO ₃
	b. iron(III) phosphate, FePO ₄	d.	magnesium dichromate, MgCrO ₄
 47.	Molecular compounds are usually a. composed of two or more transition eleme b. composed of positive and negative ions		
	c. composed of two or more nonmetallic elerd. exceptions to the law of definite proportion		
48.	Which of the following shows both the correct		nula and correct name of an acid?
	a. HClO ₂ , chloric acid	c.	H ₃ PO ₄ , phosphoric acid
	b. HNO ₂ , hydronitrous acid	d.	HI, iodic acid
 49.	What is the name of H ₂ SO ₃ ?		
	a. hyposulfuric acid	c.	sulfuric acid
50.	b. hydrosulfuric acid What is the formula for phosphoric acid?	d.	sulfurous acid
 50.	a. H ₂ PO ₃	c.	HPO ₂
	b. H ₃ PO ₄	d.	HPO ₄

 51.	What is the correct name for the compound Co	Cl_2 ?	
	a. cobalt(I) chlorate	c.	cobalt(II) chlorate
	b. cobalt(I) chloride	d.	cobalt(II) chloride
 52.	What is the correct formula for calcium dihydro	_	
	a. CaH ₂ PO ₄	c.	$Ca(H_2PO_4)_2$
	b. $Ca_2H_2PO_4$	d.	$Ca(H_2HPO_4)_2$
 53.	Which of the following is the correct name for	N_2C) ₅ ?
	a. nitrous oxide	c.	\mathcal{E}
	b. dinitrogen pentoxide	d.	nitrate oxide
 54.	What particle is emitted in alpha radiation?		
	a. electron	c.	helium nucleus
	b. photon	d.	hydrogen nucleus
 55.	The least penetrating form of radiation is		
	a. beta radiation	c.	alpha radiation
	b. gamma radiation	d.	X rays
 56.	When radium-226 (atomic number 88) decays be		
	a. polonium-222	c.	
	b. polonium-224	d.	radon-222
 57.	What particle is needed to complete the following	ng n	uclear equation?
	$^{56}_{25}$ Mn \rightarrow + $^{0}_{-1}$ e		
	a. ⁵⁶ ₂₇ Co	c.	⁵⁶ ₂₆ Fe ⁵⁸ ₂₄ Cr
	b. $^{27}_{25}$ Mn	d.	$_{24}^{58}$ Cr
58.	A reaction in which small nuclei combine to for	rm a	heavier nucleus is called .
	a. fission	c.	background radiation
	b. a chemical reaction	d.	fusion
 59.	How many energy sublevels are in the second p	rinc	ipal energy level?
	a. 1	c.	
	b. 2	d.	4
 60.	What is the maximum number of f orbitals in an	ıy si	ngle energy level in an atom?
	a. 1	c.	5
	b. 3	d.	7
 61.	What is the maximum number of electrons in the	ne se	2 2
	a. 2	c.	18
	b. 8	d.	32
 62.	When an electron moves from a lower to a high	er e	nergy level, the electron
	a. always doubles its energy		
	b. absorbs a continuously variable amount of	enei	rgy
	c. absorbs a quantum of energyd. moves closer to the nucleus		
62			what is the sain of the other electron in that enhitely
 63.	a. zero	vise	what is the spin of the other electron in that orbital? counterclockwise
	b. clockwise	d.	both clockwise and counterclockwise
64.	What types of atomic orbitals are in the third pr		
 0 1.	a. s and p only	c.	
	b. <i>p</i> and <i>d</i> only	d.	= -
	-		

b. Erwin Schrodinger

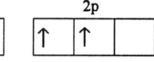
65	5. What is the electron configuration of pota	assium?	
	a. $1s^2 2s^2 2p^2 3s^2 3p^2 4s^1$	c. $1s^2 2s^2 3s^2 3p^6 3d^1$	
	b. $1s^2 2s^2 2p^{10} 3s^2 3p^3$	d. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$	
66	6. If three electrons are available to fill three	e empty $2p$ atomic orbitals, how will the electrons be distribute	ed in
	the three orbitals?	,	
	a. one electron in each orbital		
	b. two electrons in one orbital, one in a		
	c. three in one orbital, none in the other		
(7	d. Three electrons cannot fill three emp	• •	
67	7 1	c. 2	
	a. 0 b. 1	d. 3	
68	8. How many half-filled orbitals are in a bro	-	
	a. 1	c. 3	
	b. 2	d. 4	
69	9. Which color of visible light has the shorte	est wavelength?	
	a. yellow	c. blue	
	b. green	d. violet	
70	\mathcal{E}	waves have the highest frequencies?	
	a. ultraviolet light waves	c. microwaves	
	b. X-rays	d. gamma rays	
71	\mathcal{E}		
	a. drops from a higher to a lower energy	•	
	b. jumps from a lower to a higher energc. moves within its atomic orbital	ty level	
	d. falls into the nucleus		
72		atom on Earth and of a sodium atom in the sun would be	
	a. the same	atom on Earth and of a Socialit atom in the San Would be	-•
	b. different from each other		
	c. the same as those of several other ele		
	d. the same as each other only in the ult		
73	•	ould be associated with the greatest energy of emitted light?	
	a. $n = 5$ to $n = 1$	c. $n = 2 \text{ to } n = 5$	
	b. $n = 4$ to $n = 5$	d. n = 5 to n = 4	
74		he higher energy levels of an atom compare with the energy	
	differences between the lower energy leve a. They are greater in magnitude than the		
	a. They are greater in magnitude than theb. They are smaller in magnitude than the		
	c. There is no significant difference in t		
	d. No answer can be determined from the		
75			
	a. Albert Einstein	c. Niels Bohr	

d. Ernest Rutherford

- 76. The ground state electron configuration of Ga is _____.
 - a. $1s^22s^23s^23p^64s^23d^{10}4p^1$
 - b. $1s^22s^22p^63s^23p^64s^24d^{10}4p^1$
 - c. $1s^22s^22p^63s^23p^64s^23d^{10}4p^1$
 - d. $1s^22s^22p^63s^23p^64s^23d^{10}4d^{11}$
 - e. $[Ar]4s^23d^{11}$
 - 77. The ground-state electron configuration of ____ is [Ar]4s²3d⁴.
 - a. V
 - b. Mn
 - c. Fe
 - d. Cr
 - e. K
- 78. Which electron configuration represents a violation of Hund's rule for an atom in its ground state?

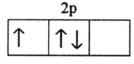










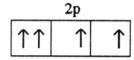


b.





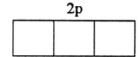
2s



c.



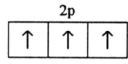
2s



d.

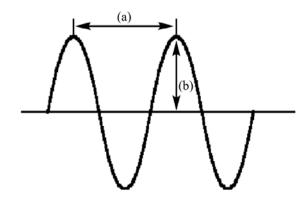


2s

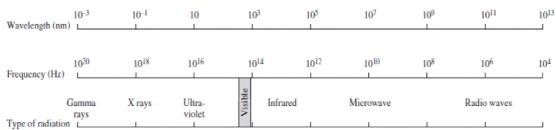


- 79. The noble gas electron configuration of argon, element 18, is _____.
 - a. [Ne]3s⁴
 - b. $[Ar]3s^23p^2$
 - c. $[Ne]3s^23p^6$
 - d. $[He]2s^42p^{10}$
 - e. $[He]3s^4$

80. In the following diagram of a wave



- a. (a) is amplitude and (b) is wavelength
- b. (a) is frequency and (b) is amplitude
- c. (a) is wavelength and (b) is frequency
- d. (a) is wavelength and (b) is amplitude
- 81. Using the figure below, which radiation has the longest wavelength?



- a. Gamma rays
- b. X rays
- c. Ultraviolet
- d. Microwave
- 82. The orbital diagram for a ground-state nitrogen atom is

D.
$$\uparrow \downarrow$$
 $\uparrow \downarrow$ $\uparrow \downarrow$ \uparrow

- a. A
- b. B
- c. C
- d. D

83. Arrange the following elements: P³⁻, S²⁻, K⁺, Ca²⁺, Sc³⁺, in order of increasing ionic size.

a. K^+ , Ca^{2+} , Sc^{3+} , S^{2-} , P^{3-}

c. Sc^{3+} , Ca^{2+} , K^+ , P^{3-} , S^{2-}

b. P³⁻, S²⁻, K⁺, Ca²⁺, Sc³⁺

d. Sc^{3+} , Ca^{2+} , K^+ , S^{2-} , P^{3-}

84. What element in the second period has the largest atomic radius?

a. lithium

c. carbon

b. neon

d. potassium

85. Which of the following has the smallest atomic radius?

a. bromine

c. sulfur

b. selenium

d. oxygen

86. Which group of elements are the most electronegative?

a. Transition metals

c. Noble gases

b. Alkali metals

d. Halogens

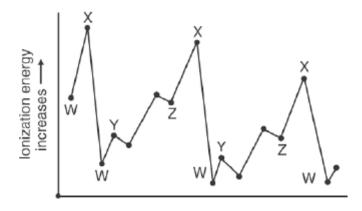
87. What is the element with the lowest electronegativity value?

a. helium

c. cesium

b. calcium

d. fluorine



Atomic number increases —

The chart above shows the relationship between the first ionization energy and the increase in atomic number. The letter on the chart for the alkali family of elements is

a. Z

c. X

b. Y

d. W

89. Which element would have a higher tendency to attract electrons.

a. Fluorine

b. Selenium

90.

Barium is a larger atom than Calcium. Which of the following is the *BEST* explanation why this occurs?

calcium

- a. Barium only has two valence electrons
- b. Barium has two more energy levels than calcium
- d. Barium more electrons and protons and more attraction

Barium has more electrons than

91. Which statement is true about electronegativity?

- a. Electronegativity generally increases as you move from top to bottom within a group.
- b. Electronegativity is the ability of an anion to attract another anion.
- c. Electronegativity generally increases from left to right across a period.
- d. Electronegativity generally is higher for metals than for nonmetals.

Name: _			ID: A
92	 Which of the following factors contributes to table as the atomic number increases? a. fewer electrons in the highest occupied et b. increase in number of protons c. increase in size of the nucleus d. increase in atomic size 		ecrease in ionization energy within a group in the periodic level
93	 a. decreases as you move from left to right b. increases as you move from left to right c. decreases as you move from top to botto d. remains constant within a period 	across	a period
94	a. An increase in the degree of shielding due to an increase attraction to the nucleus causes a decrease in atomic size.		<u> </u>
	b. An increase in the degree of shielding due to an increase attraction to the nucleus causes an increase in atomic size.	_	Shielding has effect on the relative atomic size within a period and decreases
95	Which of the following elements has the sma	ıllest a	tomic radius?
	a. chlorine	c.	bromine
0.4	b. sulfur	d.	selenium
96	5. Which of the following sets of symbols repre		-
	a. ${}^{91}_{42}J$ ${}^{92}_{42}J$ ${}^{93}_{40}J$		$^{138}_{59}$ Q $^{133}_{55}$ Q $^{133}_{54}$ Q
	b. ${}^{84}_{38}M {}^{86}_{38}M {}^{87}_{38}M$	d.	$^{50}_{19}\mathrm{L} ^{50}_{20}\mathrm{L} ^{50}_{21}\mathrm{L}$
	Response the or more choices that best complete the states	nent o	r answer the question.
97	'. A anion:		
	a. ends in -ide	c.	positive charge
	b. is a nonmetal	d.	gains electrons
98	. A molecule:		
	a. is a covalent compound	c.	is composed of metals and nonmetals
	b. is composed of nonmetals	d.	does not conduct electricity
99	e s	o-?	77.04
	a. HF	C.	HCl
4.5	b. H ₂ SO ₄	d.	H_2SO_3
100	*	_	-1
	a. formula unitsb. good conductors of electricity	c. d.	electrically neutral composed of nonmetals
	o. good conductors of electricity	u.	composed of nonnetars

Fall Midterm Practice Test-Fall 2017 Answer Section

MATCHING

1.	ANS: OBJ:		PTS:	1	DIF:	L1	REF:	p. 42
2	ANS:		PTS:	1	DIF:	Т 1	REF:	n 11
۷.	OBJ:		STA:		DII.	LI	KEF.	p. 44
2	ANS:		PTS:		DIF:	Т 1	DEE.	- 15
3.	OBJ:		P15:	1	DIF:	LI	REF:	p. 43
1	ANS:		PTS:	1	DIF:	Т 1	DEE.	 52
4.		2.4.1	STA:		DIF:	LI	REF:	p. 33
_					DIE.	т 1	DEE.	52
3.	ANS:		PTS: STA:		DIF:	LI	REF:	p. 33
	ODJ:	2.4.1	51A:	CII.8				
6	ANS:	E	PTS:	1	DIF:	L1	REF:	p. 112
•		4.3.1		Ch.11.c	211.		1121	P. 112
7.	ANS:			1	DIF:	L1	REF:	p. 111
, ,	OBJ:			Ch.1.e	211.		1121	P. 111
8.	ANS:		PTS:		DIF:	L1	REF:	p. 110
		4.3.1		Ch.1.a				P
9.	ANS:		PTS:		DIF:	L1	REF:	p. 114
		4.3.3		Ch.1.a				1
10.	ANS:		PTS:		DIF:	L1	REF:	p. 114
	OBJ:							F
11.	ANS:	A	PTS:	1	DIF:	L1	REF:	p. 130 p. 131
	OBJ:	5.1.2	STA:	Ch.1.e				
12.	ANS:	F	PTS:	1	DIF:	L1	REF:	p. 145
	OBJ:	5.1.3	STA:	Ch.1.e				
13.	ANS:	D	PTS:	1	DIF:	L1	REF:	p. 142
	OBJ:	5.1.3	STA:	Ch.1.j				
14.	ANS:	В	PTS:	1	DIF:	L1	REF:	p. 133
	OBJ:	5.1.3 5.2.1	STA:	Ch.1.j				
15.	ANS:	C	PTS:	1	DIF:	L1	REF:	p. 133
	OBJ:	5.2.1	STA:	Ch.1.e				
16.	ANS:	E	PTS:	1	DIF:	L1	REF:	p. 134
	OBJ:	5.2.1	STA:	Ch.1.e				_
FIDI	E CH	NCE						

MULTIPLE CHOICE

17. ANS: B	PTS: 1	DIF: L1	REF: p. 23
OBJ: 1.3.2			
18. ANS: D	PTS: 1	DIF: L2	REF: p. 22
OBJ: 1.3.2			

19.		B 2.1.1	PTS:	1	DIF:	L1	REF:	p. 39
20.		C	PTS:	1	DIF:	L1	REF:	p. 39
21.	ANS: OBJ:	D	PTS:	1	DIF:	L1	REF:	p. 40
22.	ANS:	C	PTS:	1	DIF:	L2	REF:	p. 42
23.	OBJ:	В	PTS:		DIF:	L2	REF:	p. 40
24.	ANS:	2.2.1 A 2.2.2	PTS:	1	DIF:	L2	REF:	p. 45
25.	ANS: OBJ:	D	PTS:		DIF:	L2	REF:	p. 46
26.	ANS: OBJ:	C	PTS:	1	DIF:	L2	REF:	p. 53
27.	ANS: OBJ:	C	PTS:	1	DIF:	L2	REF:	p. 53
28.		D	PTS:	1	DIF:	L2	REF:	p. 53
29.	ANS:	A 2.1.4 2.4.1 2		1	DIF:	L2	REF:	p. 54
30.	ANS:	A 2.1.4 2.4.2		1	DIF:	L2	REF:	p. 54
31.	ANS:	·	PTS:	1	DIF:	L1	REF:	p. 101 p. 102
32.		C	PTS:	1	DIF:	L2	REF:	p. 102
33.	ANS:	D 4.2.1			DIF:	L2	REF:	p. 105
34.	ANS:	C 4.2.1	PTS:	1	DIF:	L3	REF:	p. 106
35.	ANS: OBJ:	C	PTS:		DIF:	L2	REF:	p. 108
36.	ANS: OBJ:	A	PTS:	1 Ch.1.e	DIF:	L2	REF:	p. 107 p. 108
37.	ANS: OBJ:		PTS: STA:	1 Ch.1.a Ch.11		L1	REF:	p. 111
38.	ANS: OBJ:		PTS: STA:	1 Ch.11.c	DIF:	L1	REF:	p. 112 p. 113
39.	ANS: OBJ:	A 4.2.1 4.3.1	PTS: STA:		DIF:	L2	REF:	p. 110
40.	ANS: OBJ:	B 4.3.1 4.3.4			DIF:	L2	REF:	p. 111
41.	ANS: OBJ:	C 9.2.1	PTS: STA:		DIF:	L1	REF:	p. 262 p. 263
42.	ANS: OBJ:		PTS: STA:		DIF:	L2	REF:	p. 262

43.	ANS:	A	PTS:	1	DIF:	L2	REF:	p. 262
15.		9.2.1			ΔП.	22	TCLI.	p. 202
44.			PTS:		DIF:	L2	REF:	p. 261 p. 262
	OBJ:		STA:					
45.	ANS:	C	PTS:	1	DIF:	L2	REF:	p. 257 p. 261 p. 262
	OBJ:	9.2.2	STA:	Ch.2				
46.	ANS:				DIF:	L2	REF:	p. 264 p. 265 p. 266
		9.1.3 9.2.2						
47.	ANS:		PTS:		DIF:	L1	REF:	p. 268
		9.3.1 9.3.2						
48.	ANS:				DIF:	L2	REF:	p. 272
40		9.4.1			DIE	T 2	DEE	272
49.	ANS:	D 9.4.1	PTS: STA:		DIF:	L2	KEF:	p. 272
50	ANS:				DIF:	1.2	DEE.	n 272
50.		9.4.2			DII'.	LZ	KLI.	p. 272
51	ANS:				DIF:	1.2	REF:	p. 261 p. 262 p. 277
51.		9.2.1 9.5.2			DII .	L2	TCLT.	p. 201 p. 202 p. 277
52.	ANS:				DIF:	L3	REF:	p. 257 p. 264
		9.2.2 9.5.2						1 11
53.	ANS:				DIF:	L2	REF:	p. 269 p. 277
	OBJ:	9.3.2 9.5.3	STA:	Ch.2.b Ch.5				
54.	ANS:				DIF:	L1	REF:	p. 800
		25.1.2		Ch.11.d				
55.	ANS:	C	PTS:	1	DIF:	L1	REF:	p. 802
						21		1
		25.1.2	STA:					
56.	ANS:	25.1.2 D	STA: PTS:	1	DIF:	L2		p. 800 p. 804
	ANS: OBJ:	25.1.2 D 25.1.2 25.2.1	STA: PTS:	1	DIF: STA:	L2 Ch.11.d	REF:	p. 800 p. 804
	ANS: OBJ: ANS:	25.1.2 D 25.1.2 25.2.1 C	STA: PTS:	1	DIF:	L2 Ch.11.d	REF:	
57.	ANS: OBJ: ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1	STA: PTS: PTS: STA:	1 1 Ch.11.d	DIF: STA: DIF:	L2 Ch.11.d L3	REF:	p. 800 p. 804 p. 803 p. 804
57.	ANS: OBJ: ANS: OBJ: ANS:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D	STA: PTS: PTS: STA: PTS:	1 1 Ch.11.d 1	DIF: STA:	L2 Ch.11.d L3	REF:	p. 800 p. 804
57. 58.	ANS: OBJ: ANS: OBJ: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3	STA: PTS: PTS: STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b	DIF: STA: DIF:	L2 Ch.11.d L3	REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813
57. 58.	ANS: OBJ: ANS: OBJ: ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B	STA: PTS: PTS: STA: PTS: STA: PTS:	1 Ch.11.d 1 Ch.11.b	DIF: STA: DIF:	L2 Ch.11.d L3	REF: REF:	p. 800 p. 804 p. 803 p. 804
57. 58. 59.	ANS: OBJ: ANS: OBJ: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3	STA: PTS: PTS: STA: PTS: STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i	DIF: STA: DIF: DIF:	L2 Ch.11.d L3	REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813
57. 58. 59.	ANS: OBJ: ANS: OBJ: ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D	STA: PTS: STA: PTS: STA: PTS: STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i	DIF: STA: DIF: DIF:	L2 Ch.11.d L3 L1 L2	REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131
57.58.59.60.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3	STA: PTS: STA: PTS: STA: PTS: STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2	REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131
57.58.59.60.61.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3	STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2	REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132
57.58.59.60.61.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: ANS: ANS:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3	STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3	REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132
57.58.59.60.61.62.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3 C 5.1.3 C	STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3	REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128
57.58.59.60.61.62.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: ANS:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 C 5.1.3	STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1	DIF: STA: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3	REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132
57.58.59.60.61.62.63.	ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 C 5.1.3 C 5.1.3	STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1	REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128 p. 134
57.58.59.60.61.62.63.	ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: OBJ: ANS: ANS: ANS: ANS: ANS: ANS: ANS:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3 C 5.1.3 C 5.2.1 C	STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1	DIF: STA: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1	REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128
57.58.59.60.61.62.63.64.	ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3 C 5.1.3 C 5.2.1 C	STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1 L1	REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128 p. 134 p. 131
57.58.59.60.61.62.63.64.	ANS: OBJ: ANS: ANS: ANS: ANS: ANS: ANS: ANS: ANS	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3 C 5.1.3 C 5.2.1 C 5.2.1 D	STA: PTS:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1 L1	REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128 p. 134
57.58.59.60.61.62.63.64.65.	ANS: OBJ:	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 C 5.1.3 C 5.1.3 C 5.2.1 C 5.2.1 D	STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1 L2 L2	REF: REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128 p. 134 p. 131 p. 133 p. 134 p. 135
57.58.59.60.61.62.63.64.65.	ANS: OBJ: ANS: ANS: ANS: ANS: ANS: ANS: ANS: ANS	25.1.2 D 25.1.2 25.2.1 C 25.2.1 D 25.3.3 B 5.1.3 D 5.1.3 B 5.1.3 C 5.1.3 C 5.2.1 C 5.2.1 C	STA: PTS: STA:	1 Ch.11.d 1 Ch.11.b 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i 1 Ch.1.i	DIF: STA: DIF: DIF: DIF: DIF: DIF: DIF: DIF:	L2 Ch.11.d L3 L1 L2 L2 L3 L3 L1 L2 L2	REF: REF: REF: REF: REF: REF: REF:	p. 800 p. 804 p. 803 p. 804 p. 813 p. 131 p. 131 p. 132 p. 132 p. 128 p. 134 p. 131

67.	ANS:	C	PTS:	1	DIF:	L3	REF:	p. 133 p. 134
	OBJ:			Ch.1.g				
68.	ANS: OBJ:		PTS:	l Ch.1.g	DIF:	L3	REF:	p. 133 p. 134
69.	ANS:		PTS:	~	DIF:	L2	REF:	p. 139
	OBJ:			Ch.1.j				•
70.	ANS: OBJ:		PTS:	1 Ch.1.j	DIF:	L2	REF:	p. 139
71.	ANS:		PTS:	-	DIF:	L2	REF:	p. 141
	OBJ:	5.3.2		Ch.1.j				1
72.	ANS:		PTS:	1 Ch 1 :	DIF:	L2	REF:	p. 141
73.	ANS:	5.3.2 5.3.3 A	PTS:	Ch.1.j	DIF:	L2	REF:	p. 143
, 5.	OBJ:			Ch.1.j	DII .	22	TCLT.	p. 1 .5
74.	ANS:		PTS:	1	DIF:	L3	REF:	p. 143
75	OBJ: ANS:		STA: PTS:	Ch.1.j	DIF:	T 1	REF.	p. 130
75.	OBJ:			Ch.1.i	DII.	Li	ICLI.	p. 150
76.	ANS:		PTS:	1	DIF:	2	REF:	Page Ref: 6.8
77	OBJ:	6.8; G2 D	PTS:	1	DIF:	2	REF.	Page Ref: 6.8
77.		6.8; G2	115.	1	DII.	2	KLI.	rage Ref. 0.0
78.	ANS:		PTS:	1	DIF:	2	REF:	Page Ref: 6.8
70	OBJ: ANS:	6.8; G2	PTS:	1	DIF:	2	DEE:	Page Ref: 6.8
1).		6.9; G2	115.	1	DII.	2	KLI.	1 age Ref. 0.0
80.	ANS:		PTS:	1	DIF:	Easy	REF:	Section: 7.1
Q 1	OBJ: ANS:	EK.1.D.3	PTS:	1	DIF:	Medium	DEE.	Section: 7.1
01.		EK.1.D.3	115.	1	DII.	Medium	KLI.	Section. 7.1
82.	ANS:		PTS:	1	DIF:	Medium	REF:	Section: 7.8
Q2	OBJ: ANS:	EK.1.B.2	PTS:	1				
			PTS:		DIF:	1.2	DEE.	n 171
04.	ANS: OBJ:				DIF:	LZ	KEF:	p. 171
05				Ch.1.a				
	ANS:		PTS:					
	ANS:		PTS:					
87.	ANS:		PTS:		DIF:	L1	REF:	p. 177
	OBJ:		SIA:	Ch.1.c				
88.	ANS:	D						
	10							
	PTS:		STA:					
89.	ANS:	A	PTS:	1				
90.	ANS:	В	PTS:	1				
91.	ANS:	C	PTS:	1	DIF:	L2	REF:	p. 177
	OBJ:	6.3.3	STA:	Ch.1.c				

92.	ANS: D	PTS: 1	DIF: L2	REF: p. 174
	OBJ: 6.3.1 6.3.3	STA: Ch.1.c		
93.	ANS: A	PTS: 1	DIF: L2	REF: p. 171
	OBJ: 6.3.1	STA: Ch.1.a		
94.	ANS: C	PTS: 1		
95.	ANS: A	PTS: 1	DIF: L3	REF: p. 171 p. 175
	OBJ: 6.3.1	STA: Ch.1.a		
96.	ANS: B	PTS: 1	DIF: L3	REF: p. 112 p. 113
	OBJ: 4.3.1	STA: Ch.11.c		

MULTIPLE RESPONSE

97.	ANS:	A, B, D	PTS:	1
98.	ANS:	A, B, D	PTS:	1
99.	ANS:	A, C	PTS:	1
100.	ANS:	A. B. C	PTS:	1