



SECTION 4

ASSESSMENT REFERENCE MATERIALS

PERIODIC TABLE OF THE ELEMENTS

18																																																																																									
VIIIA																																																																																									
1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18																																																							
IA		IIA		IIIB		IVB		VB		VIB		VIIB		VIII		IB		IIB		IIIA		IVA		VA		VIA		VIIA		VIIIA		VIIIA																																																									
1 H 1.01	2 He 4.00	3 Li 6.94	4 Be 9.01	5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18	11 Na 23.0	12 Mg 24.3	13 Al 27.0	14 Si 28.1	15 P 31.0	16 S 32.1	17 Cl 35.5	18 Ar 39.9	19 K 39.1	20 Ca 40.1	21 Sc 45.0	22 Ti 47.9	23 V 50.9	24 Cr 52.0	25 Mn 54.9	26 Fe 55.8	27 Co 58.9	28 Ni 58.7	29 Cu 63.5	30 Zn 65.4	31 Ga 69.7	32 Ge 72.6	33 As 74.9	34 Se 79.0	35 Br 79.9	36 Kr 83.8	37 Rb 85.5	38 Sr 87.6	39 Y 88.9	40 Zr 91.2	41 Nb 92.9	42 Mo 95.9	43 Tc (98.9)	44 Ru 101.1	45 Rh 102.9	46 Pd 106.4	47 Ag 107.9	48 Cd 112.4	49 In 114.8	50 Sn 118.7	51 Sb 121.8	52 Te 127.6	53 I 126.9	54 Xe 131.3	55 Cs 132.9	56 Ba 137.3	57-71 Lanthanide Series	72 Hf 178.5	73 Ta 180.9	74 W 183.9	75 Re 186.2	76 Os 190.2	77 Ir 192.2	78 Pt 195.1	79 Au 197.0	80 Hg 200.6	81 Tl 204.4	82 Pb 207.2	83 Bi 209.0	84 Po (209)	85 At (210)	86 Rn (222)	87 Fr (223)	88 Ra (226)	89-103 Actinide Series	104 Rf (261)	105 Db (262)	106 Sg (266)	107 Bh (264)	108 Hs (277)	109 Mt (268)	110 Ds (271)	111	112	113	114	115	116	117	118

Some of the elements 111 and above have been reported but not fully authenticated and named.

DEFINITIONS AND PHYSICAL CONSTANTS

The value of 9.8 m/s^2 is used for the acceleration of gravity near the earth's surface.

The ideal gas constant is 8.31 J/K or $0.0821 \text{ L}\cdot\text{atm/mol}\cdot\text{K}$.

Planck's constant is $6.63 \times 10^{-34} \text{ J}\cdot\text{s}$.

Avogadro's number is 6.02×10^{23} .

In questions on electricity and magnetism, the term *current* refers to "conventional current" and the use of the right-hand rule is assumed.

END OF DEFINITIONS AND PHYSICAL CONSTANTS