



Teacher Name:

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Class:

7

Subject:

Science

Date:

2nd November 2017

TOPICS: DICHOTOMOUS KEY, ELEMENTS AND COMPOUNDS.

MIXTURES

Q.1 (a)- Give chemical symbols for the following elements.

Element	Its chemical symbol	Element	Its chemical symbol
Oxygen		Sulphur	
Silicon		Zinc	
Aluminium		Titanium	
Calcium		Neon	
Magnesium		Bromine	
Carbon		Argon	
Hydrogen		Chromium	
Nitrogen		Nickel	
Phosphorous		Boron	
Helium		Lithium	
Chlorine		Beryllium	
Cobalt		Manganese	
Iodine		Fluorine	



(b). Give other names and the chemical symbols of these elements.

Element	Its other name	Its chemical symbol
Iron		
Sodium		
Potassium		
Copper		
Silver		
Tungsten		
Gold		
Lead		
Mercury		
Antimony		
Tin		

Q.2 (a) Give reasons. Why,

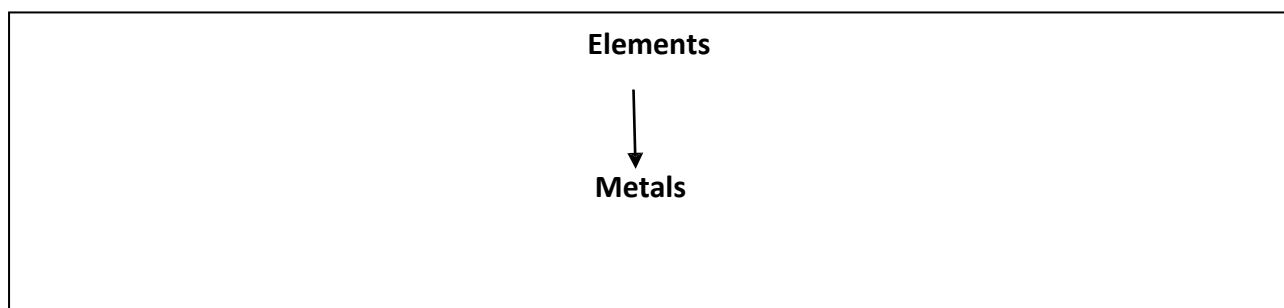
(b) These are different ways of forming compounds, Give their examples.

1. Combining **two elements** during chemical reaction:

2. Combining **element** and **compound** during chemical reaction:

3. Combining **two compounds** during chemical reaction:

Q.3 (a) Make a dichotomous key to identify these elements, copper, sulphur, iron, Mercury





(b) Sort out these elements into the columns below.

Titanium, carbon, neon, helium, calcium, copper, chlorine, sodium, Cobalt, Oxygen, Magnesium, Nickel, Iodine

Metallic elements	Non metallic elements



Q.4 (a) Differentiate between :

Properties	Metals	Non metals
appearance		
Density		
Melting and boiling points		
Heat and electrical conductivity		
Can be drawn into wires		
Can be beaten into shapes		
e.g.		

Periodic Table of Elements

Periodic Table of Elements																																																																																																					
Key																																																																																																					
[C] Solid [Hg] Liquid [H] Gas [Rf] Unknown																																																																																																					
Metals: Alkali metals, Alkaline earth metals, Lanthanoids, Actinoids, Transition metals, Post-transition metals																																																																																																					
Nonmetals: Other nonmetals, Halogens, Noble gases																																																																																																					
Metalloids																																																																																																					
1 IA 1 H Hydrogen 1.00794	2 IIA 3 Li Lithium 6.941	4 Be Beryllium 9.012182	5 B Boron 10.811	6 C Carbon 12.0107	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984032	10 Ne Neon 20.1797	11 Na Sodium 22.98976928	12 Mg Magnesium 24.3050	13 Al Aluminium 26.9815386	14 Si Silicon 28.0855	15 P Phosphorus 30.973762	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 VIII A 18 Ar Argon 39.948	19 K Potassium 39.0983	20 Ca Calcium 40.078	21 Sc Scandium 44.955912	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938045	26 Fe Iron 55.845	27 Co Cobalt 58.933195	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.92160	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798	37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.90585	40 Zr Zirconium 91.224	41 Nb Niobium 92.90638	42 Mo Molybdenum 95.96	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.90550	46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.60	53 I Iodine 126.90447	54 Xe Xenon 131.293	55 Cs Caesium 132.9054519	56 Ba Barium 137.327	57 La Lanthanum 138.90547	58 Ce Cerium 140.116	59 Pr Praseodymium 140.90765	60 Nd Neodymium 144.242	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.92535	66 Dy Dysprosium 162.500	67 Ho Holmium 164.93032	68 Er Erbium 167.259	69 Tm Thulium 168.93421	70 Yb Ytterbium 173.054	71 Lu Lutetium 174.9668	72 Hf Hafnium 178.49	73 Ta Tantalum 180.94788	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.084	79 Au Gold 196.966569	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.98040	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)	87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium (227)	90 Th Thorium 232.03806	91 Pa Protactinium 231.03588	92 U Uranium 238.02891	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.

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Key
Atomic #
Symbol
Name
Atomic Mass

58-71	58 Ce Cerium (140.116)	59 Pr Praseodymium (140.90765)	60 Nd Neodymium (144.242)	61 Pm Promethium (145)	62 Sm Samarium (150.36)	63 Eu Europium (151.964)	64 Gd Gadolinium (157.25)	65 Tb Terbium (158.92535)	66 Dy Dysprosium (162.500)	67 Ho Holmium (164.93032)	68 Er Erbium (167.259)	69 Tm Thulium (168.93421)	70 Yb Ytterbium (173.054)	71 Lu Lutetium (174.9668)
90-103	90 Th Thorium (232.03806)	91 Pa Protactinium (231.03588)	92 U Uranium (238.02891)	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

*Edited by Dr. Casagrande

(b) Name the metalloids from the Periodic Table.

