

**Answers to Worksheet 5 - Chemical Bonding**  
**Science(Chemistry) Theory Workbook Pg 36 to 45**

Check It ( 37 to 39 )

1. C	2. B	3. D	4. A	5. B	6. A	7. D	8. B	9. B
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- 10a) calcium oxide and potassium chloride  
 b) carbon dioxide and methane  
 c) calcium oxide or potassium chloride ( any one, an ionic one )  
 d) carbon dioxide or methane ( any one, a covalent one )  
 e) helium ( a noble gas , is monatomic, as single atoms)
- 11a) C : ( 2,4 ); O : ( 2,6 ); Na : ( 2,8,1 ); Si : ( 2,8,4 ); Cl : ( 2,8,7 )
- b)(i) **No. of neutrons = Nucleon no – no of protons = 9 – 4 = 5**  
 (ii) No. of neutrons = 28 – 14 = 14
- c) Beryllium and sodium (are metals, but, diamond does not conduct)
- d)(i) NaCl, sodium chloride  
 (ii) Na<sub>2</sub>O, sodium oxide  
 (iii) CO<sub>2</sub>, carbon dioxide or CO, carbon monoxide  
 (iv) Na<sub>2</sub>CO<sub>3</sub>, sodium carbonate (C and O forms the radical ion CO<sub>3</sub><sup>2-</sup>)
- e) Carbon dioxide is a covalent compound with a simple molecular structure. It is made up of small molecules with weak intermolecular forces of attraction between molecules. Little amount of heat energy is needed to overcome these weak forces. Thus, it has a low boiling point and is a gas at r.t.p.

Notes: I. Type of Bonding - Ionic & Covalent

