



CHEMISTRY ONLINE
— **TUITION** —

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CHEMISTRY

PHYSICAL CHEMISTRY

LEVEL & BOARD:	OCR (AS - LEVEL)
TOPIC:	Atoms, Amount, Equation & Reactions,
PAPER TYPE:	SOLUTION 1
TOTAL QUESTIONS	07
TOTAL MARKS	17

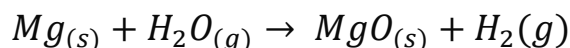
Compound, Formula & Equation -1

Q.1 In^{3+}

As it is in group 3, so it tends to lose three electrons.

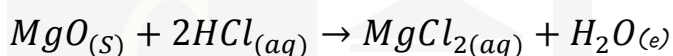
Q.2

(i) Reaction 1

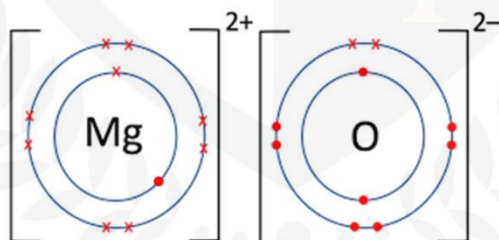


- **Exam point:** Magnesium shows an insignificant reaction with water but burns vigorously with steam or water vapours.

Reaction 2



- **Exam point:** Metal oxide are basic in nature where as non - metal oxides are alkaline in nature
- (ii) $Mg_3 N_2$ has ionic bonding -developing an ionic lattice
Magnesium being a metal, tends to lose electron whereas Nitrogen being a non-metal, tends to gain electrons.
- (iii) Dot and cross diagram for MgO



Q.3

- Formula of compound when Aluminum reacts with chlorine
 $AlCl_3$

Q.4

(i) There would be no reaction as lead chloride is soluble.

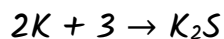


Lead carbonate	Lead Nitrate
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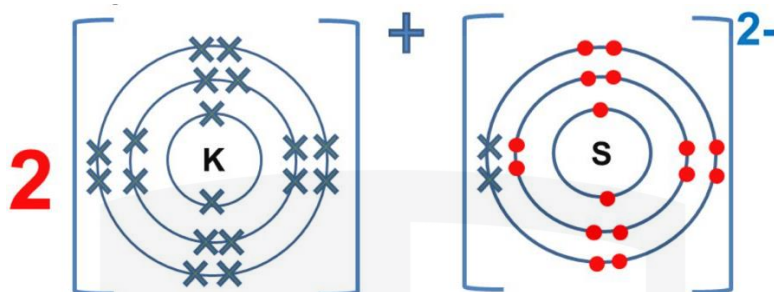
(b)

(i) Potassium Chloride can be used as fire suppressant.

(ii) Potassium Sulfide

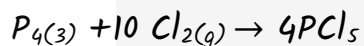


(iii) Dot and cross diagram of Potassium Sulfide



Q.5

- Reaction between phosphorous and Chlorine



Q.6

- Alkene with 12 carbons will have molecules formula as $C_{12}H_{24}$
Empirical formula would be



Q.7

- The salt is sodium citrate.
- The ion would therefore be citrate ions with formula,



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