

Date Planned : __ / __ / __	Daily Tutorial Sheet-8	Expected Duration : 30 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

96. One can obtain a silica garden if :
- Crystals of coloured cations are added to a strong solution of sodium silicate
 - Sodium silicate solution is treated with a base
 - SiF_4 is hydrolysed
 - Silicon salts are grown in a garden
97. Silicon carbide is used as a/an :
- abrasive
 - dehydrating agent
 - solvent
 - catalyst
98. A student prepared a sample of silicon chloride by passing chlorine over heated silicon and collecting the condensed silicon chloride in a small specimen tube. He analysed the chloride in a small specimen tube. He analysed the chloride by dissolving a known mass of it in water, and titrating the solution with standard silver nitrate solution. The formula of the silicon chloride as obtained by this method was $\text{SiCl}_{2.6}$ as against a 'true' formula of SiCl_4 .
Which of the following possible errors could have resulted in this wrong formula ?
- The excess silicon chloride obtained is dissolved in chlorine
 - The "standard" silver nitrate solution was less concentrated than was stated on the label
 - More silicon chloride than the student supposed was actually used owing to inaccurate weighing
 - The small specimen tube was not dry
99. **Statement-1** : Silicones are water repelling in nature.
Statement-2 : Silicones are organosilicon polymers, which have $(-\text{R}_2\text{SiO}-)$ as repeating unit.
- Statement-1 is True, Statement-2 is True and Statement-2 is a correct explanation for Statement-1
 - Statement-1 is True, Statement-2 is True and Statement-2 is NOT a correct explanation for Statement-1
 - Statement-1 is True, Statement-2 is False
 - Statement-1 is False, Statement-2 is True
- *100. The linear shape of CO_2 is due to :
- tetravalency of carbon
 - sp hybridisation of carbon
 - $p\pi - p\pi$ bonding between carbon and oxygen
 - catenation property of carbon
- *101. Me_3SiCl is used during polymerization of organo silicones because :
- The chain length of the organo silicon polymers can be controlled by adding Me_3SiCl
 - Me_3SiCl blocks the end terminals of silicone polymer
 - Me_3SiCl improves the quality and yield of the polymer
 - Me_3SiCl acts as a catalyst during polymerization

*102. Which of the following statements are correct :

- (A) Fullerenes have dangling bonds
- (B) Fullerenes are cage-like molecules
- (C) Graphite is thermodynamically most stable allotrope of carbon
- (D) Graphite is slippery and therefore used as a dry lubricant in machines

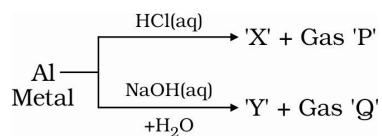
*103. Identify the correct resonating structures of carbon dioxide from the ones given below :

- (A) $O - C \equiv O$
- (B) $O = C = O$
- (C) $\overset{2-}{C} = \overset{2+}{O} = O$
- (D) ${}^{-}O - C \equiv O^{+}$

104. Silicon dissolves in excess of HF due to formation of :

- (A) SiF_4
- (B) SiH_4
- (C) H_2SiF_6
- (D) $Si(OH)_4$

105. The incorrect statement regarding below reaction is :



- (A) Al shows amphoteric character
- (B) Gas 'P' and 'Q' are different
- (C) Both X and Y are water soluble
- (D) Gas Q is inflammable