DPP-07

Single Correct Tvpe

1. Number of O-atoms shared of each SiO_4 unit in tecto-silicates is

(A) 1 (B) 2 (C) 3 (D) 4

2. In which of the following silicates cyclic structure is present?

(A) zeolite (B) Asbestos (C) Emerald (D) Talc

3. The structural unit present in pyrosilicates is :

(A) $Si_3O_9^{6-}$ (B) SiO_4^{4-} (C) $Si_2O_7^{6-}$ (D) $(Si_2O_5^{2-})_n$

4. The structures of quartz, mica and asbestos have the common basic unit of

(A) $(SiO_4)^{4-}$ (B) $(SiO_3)^{2-}$ (C) $(SiO_4)^{2-}$ (D) SiO_2

5. $(Si_2O_5)_n^{2n-}$ anion is obtained when :

(A) no oxygen of a SiO_4^4 tetrahedron is shared with another SiO_4^{4-} tetrahedron

(B) one oxygen of aSiO_4^4 tetrahedron is shared with another $SiO_4{}^{4-}$ tetrahedron

(C) two oxygen of a SiO_4^4 tetrahedron is shared with another SiO_4^{4-} tetrahedron

(D) three oxygen of a SiO_4^4 tetrahedron is shared with another SiO_4^4 tetrahedron

6. Silicate having one monovalent corner oxygen atom in each tetrahedron unit is :

(A) sheet silicate (B) cyclic silicate

(C) single chain silicate (D) double chain silicate

7. Select the incorrect match :

(A) Pyroxenes ; $CaAl(SiO_3)_2$

(B) Amphiboles ; $Ca_2Mg_5[Si_4O_{11})_2](OH)_2$

(C) quartz ; SiO_2

(D) zeolites ; $Na_2(Al_2Si_3O_{10}) \cdot 2H_2O$

More than One Correct Tvpe

8. Select the correct statement(s) about the silicates :

(A) The edges of tetrahedral SiO_4 units are never shared

(B) Si^{4+} may be replaced by Al^{3+} to give aluminosilicates

(C) Oxides ions form a closed packed array in which Si^{-4+} occupy the tetrahedral holes.

(D) Strong $Si-O$ bond having both ionic and covalent interactions

9. Select the correct statement(s)

(A) Double chain silicates are known as amphiboles

(B) In cyclic silicates two oxygen atoms per tetrahedron are shared

(C) orthosilicates certain discrete $(SiO_4)^{4-}$ units

(D) Asbestos mineral is a double chain silicate and mica is a sheet silicate

Match the column

10. Match the column

Types of silicates

(A) Pyrosilicates	(P) Crocidolite $[Na_2Fe_3Fe_2SiO_2(OH)_2]$
(B) Phyllo-silicates	(Q) Thortveitite $[Sc_2(Si_2O_7)]$
(C) Amphiboles	(R) Phenacite $Be_2[SiO_4]$
(D) Neso-silicates	(S) Kaolinite $Al_2(OH)_4[Si_2O_5]$

ANSWER KEY

1.	D	**2.**	C	**3.**	C	**4.**	A	**5.**	D	**6.**	A	**7.**	A
8.	ABCD	**9.**	ABCD	**10.**	[A - Q , B - S , C - P , D - R]								