PYQSide PYQSide.com — free PYQs with solutions Powered by TestBlink

NEET P-BLOCK ELEMENTS (GROUP 13 & 14) — GROUP 14 ELEMENTS (CARBON FAMILY) — PYQS

Max. Marks: 64 **Questions:** 16

Section A (MCQ) — 16 questions

Q.1 Identify the incorrect statement from the following: [NEET (UG) 2026]

(1) Oxygen exhibits only −2 oxidation state.

(2) The order of catenation property of Group 14 elements is $C \gg Si > Ge \approx Sn$.

(3) Carbon has the ability to form $p\pi$–$p\pi$ multiple bond with itself.

(4) ECl_3 (E = B and Al) is a monomer when E = B and a dimer when E = Al.

Scan or tap for the full solution

Q.2 Match **List I** with **List II**:

List I		List II	
A.	Coke	I.	Carbon atoms are sp^3 hybridised
B.	Diamond	II.	Used as a dry lubricant
C.	Fullerene	III.	Used as a reducing agent
D.	Graphite	IV.	Cage like molecules

Choose the correct answer from the options given below: [NEET (UG) 2023]

(1) A-IV, B-I, C-II, D-III (2) A-III, B-I, C-IV, D-II

(3) A-III, B-IV, C-I, D-II (4) A-II, B-IV, C-I, D-III

Scan or tap for the full solution

Q.3 Choose the correct statement: [NEET (UG) 2022]

(1) Diamond and graphite have two dimensional network.

(2) Diamond is covalent and graphite is ionic.

(3) Diamond is sp^3 hybridized and graphite is sp^2 hybridized.

(4) Both diamond and graphite are used as dry lubricants.

Scan or tap for the full solution

Q.4 Identify the correct statements from the following :

A. $CO_2(g)$ is used as refrigerant for ice-cream and frozen food.

B. The structure of C_{60} contains twelve six-carbon rings and twenty five-carbon rings.

C. ZSM-5, a type of zeolite, is used to convert alcohols into gasoline.

D. CO is colourless and odourless gas. [NEET (UG) 2020]

(1) A and C only (2) B and C only

(3) C and D only (4) A, B and C only

Scan or tap for the full solution

Q.5 Which of the following is **incorrect** statement? [NEET (UG) 2019]

(1) GeX_4 (X = F, Cl, Br, I) is more stable than GeX_2

(2) SnF_4 is ionic in nature

(3) PbF_4 is covalent in nature

(4) $SiCl_4$ is easily hydrolysed

Scan or tap for the full solution

Q.6 Which of the following species is **not** stable? [NEET (UG) 2019]

(1) $[Sn(OH)_6]^{2-}$ (2) $[SiCl_6]^{2-}$

(3) $[SiF_6]^{2-}$ (4) $[GeCl_6]^{2-}$

Scan or tap for the full solution

Q.7 It is because of inability of ns^2 electrons of the valence shell to participate in bonding that [NEET 2017]

(1) Sn^{2+} is oxidising while Pb^{4+} is reducing

(2) Sn^{2+} and Pb^{2+} are both oxidising and reducing

(3) Sn^{4+} is reducing while Pb^{4+} is oxidising

(4) Sn^{2+} is reducing while Pb^{4+} is oxidising

Scan or tap for the full solution

Q.8 Which of these is not a monomer for a high molecular mass silicone polymer? [NEET 2013]

(1) Me_3SiCl (2) $PhSiCl_3$ (3) $MeSiCl_3$ (4) Me_2SiCl_2

Scan or tap for the full solution

Q.9 The basic structural unit of silicates is [NEET 2013]

(1) SiO_3^{2-} (2) SiO_4^{2-} (3) SiO^- (4) SiO_4^{4-}

Scan or tap for the full solution

Q.10 Which statement is wrong? [NEET 2013 (Karnataka)]

(1) Beryl is an example of cyclic silicate.

(2) Mg_2SiO_4 is orthosilicate.

(3) Basic structural unit in silicates is the SiO_4 tetrahedron.

(4) Feldspars are not aluminosilicates.

Scan or tap for the full solution

Q.11 Name the type of the structure of silicate in which one oxygen atom of $[SiO_4]^{4-}$ is shared. [AIPMT 2011 (Prelims)]

(1) Linear chain silicate (2) Sheet silicate

(3) Pyrosilicate (4) Three dimensional

Scan or tap for the full solution

Q.12 The straight chain polymer is formed by [AIPMT 2009]

(1) hydrolysis of CH_3SiCl_3 followed by condensation polymerisation

(2) hydrolysis of $(CH_3)_4Si$ by addition polymerisation

(3) hydrolysis of $(CH_3)_2SiCl_2$ followed by condensation polymerisation

(4) hydrolysis of $(CH_3)_3SiCl$ followed by condensation polymerisation

Scan or tap for the full solution

Q.13 Which of the following oxidation states are the most characteristic for lead and tin respectively? [AIPMT 2007]

(1) +2, +4 (2) +4, +4 (3) +2, +2 (4) +4, +2

Scan or tap for the full solution

Q.14 Which of the following anions is present in the chain structure of silicates? [AIPMT 2007]

(1) $(Si_2O_5^{2-})_n$ (2) $(SiO_3^{2-})_n$

(3) SiO_4^{4-} (4) $Si_2O_7^{6-}$

Scan or tap for the full solution

Q.15 Which one of the following statements about the zeolite is false? [AIPMT 2004]

(1) They are used as cation exchangers.

(2) They have open structure which enables them to take up small molecules.

(3) Zeolites are aluminosilicates having three dimensional network.

(4) Some of the SiO_4^{4-} units are replaced by AlO_4^{5-} and AlO_6^{9-} ions in zeolites.

Scan or tap for the full solution

Q.16 $PbO_2 \longrightarrow PbO;\ \Delta G_{298} < 0$

$SnO_2 \longrightarrow SnO;\ \Delta G_{298} > 0$

Most probable oxidation state of Pb and Sn will be [AIPMT 2001]

(1) Pb^{4+}, Sn^{4+} (2) Pb^{4+}, Sn^{2+}

(3) Pb^{2+}, Sn^{2+} (4) Pb^{2+}, Sn^{4+}

Scan or tap for the full solution

ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	**1**	**2**	**3**	**3**	**3**	**2**	**4**	**1**	**4**	**4**	**3**
Ques.	12	13	14	15	16						
Ans.	**3**	**1**	**2**	**4**	**4**						