

PYQSide

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

Max. Marks: 64

Questions: 16

Section A (MCQ)

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

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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.

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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

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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

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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) $[GeCl_6]^{2-}$

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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

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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

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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-}

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- 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.

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- Q.11** Name the type of the structure of silicate in which one oxygen atom of $[\text{SiO}_4]^{4-}$ is shared.

[AIPMT 2011 (Prelims)]

- (1) Linear chain silicate
- (2) Sheet silicate
- (3) Pyrosilicate
- (4) Three dimensional

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- Q.12** The straight chain polymer is formed by

[AIPMT 2009]

- (1) hydrolysis of CH_3SiCl_3 followed by condensation polymerisation
- (2) hydrolysis of $(\text{CH}_3)_4\text{Si}$ by addition polymerisation
- (3) hydrolysis of $(\text{CH}_3)_2\text{SiCl}_2$ followed by condensation polymerisation
- (4) hydrolysis of $(\text{CH}_3)_3\text{SiCl}$ followed by condensation polymerisation

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- 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

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- Q.14** Which of the following anions is present in the chain structure of silicates?

[AIPMT 2007]

- (1) $(\text{Si}_2\text{O}_5^{2-})_n$
- (2) $(\text{SiO}_3^{2-})_n$
- (3) SiO_4^{4-}
- (4) $\text{Si}_2\text{O}_7^{6-}$

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- 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.

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- Q.16** $\text{PbO}_2 \longrightarrow \text{PbO}$; $\Delta G_{298} < 0$



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+}

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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						