

NEET S-BLOCK ELEMENTS — GROUP 2 GENERAL PROPERTIES — PYQS

Max. Marks: 64

Questions: 16

Section A (MCQ) — 16 questions

Q.1 Which one of the following statements is correct?

[NEET (UG) 2023]

- (1) All enzymes that utilise ATP in phosphate transfer require Ca as the cofactor.
- (2) The bone in human body is an inert and unchanging substance.
- (3) Mg plays roles in neuromuscular function and interneuronal transmission.
- (4) The daily requirement of Mg and Ca in the human body is estimated to be 0.2–0.3 g.

Scan or tap for the full solution



Q.2 Among the following alkaline earth metal halides, one which is covalent and soluble in organic solvents is :

[NEET (UG) 2021]

- (1) Beryllium chloride (2) Calcium chloride
- (3) Strontium chloride (4) Magnesium chloride

Scan or tap for the full solution



Q.3 The structures of beryllium chloride in solid state and vapour phase, are :

[NEET (UG) 2021]

- (1) Chain in both
- (2) Chain and dimer, respectively
- (3) Linear in both
- (4) Dimer and Linear, respectively

Scan or tap for the full solution



Q.4 Enzymes that utilize ATP in phosphate transfer require an alkaline earth metal (M) as the cofactor. M is

[NEET (UG) 2019]

- (1) Ca (2) Sr (3) Be (4) Mg

Scan or tap for the full solution



Q.5 Which of the following oxides is most acidic in nature?

[NEET 2018]

- (1) MgO (2) BeO (3) BaO (4) CaO

Scan or tap for the full solution

Q.6 Magnesium reacts with an element (X) to form an ionic compound. If the ground state electronic configuration of (X) is $1s^2 2s^2 2p^3$, the simplest formula for this compound is

[NEET 2018]

- (1) Mg_2X_3 (2) MgX_2 (3) Mg_2X (4) Mg_3X_2

Scan or tap for the full solution



Q.7 Which of the following statements is false?

[NEET 2016 (Phase 1)]

- (1) Ca^{2+} ions are not important in maintaining the regular beating of the heart.
- (2) Mg^{2+} ions are important in the green parts of the plants.
- (3) Mg^{2+} ions form a complex with ATP.
- (4) Ca^{2+} ions are important in blood clotting.

Scan or tap for the full solution



Q.8 In context with beryllium, which one of the following statements is incorrect?

[NEET 2016 (Phase 2)]

- (1) It is rendered passive by nitric acid.
- (2) It forms Be_2C
- (3) Its salts rarely hydrolyze.
- (4) Its hydride is electron-deficient and polymeric.

Scan or tap for the full solution

Q.9 On heating which of the following releases CO_2 most easily?

[AIPMT 2015]

- (1) Na_2CO_3 (2) $MgCO_3$ (3) $CaCO_3$ (4) K_2CO_3

Scan or tap for the full solution



Q.10 Solubility of the alkaline earth metal sulphates in water decreases in the sequence

[AIPMT 2015 (Cancelled)]

- (1) $Sr > Ca > Mg > Ba$ (2) $Ba > Mg > Sr > Ca$
- (3) $Mg > Ca > Sr > Ba$ (4) $Ca > Sr > Ba > Mg$

Scan or tap for the full solution



Q.11 Which of the following alkaline earth metal sulphates has hydration enthalpy higher than the lattice enthalpy? [AIPMT 2010 (Prelims)]

- (1) CaSO_4 (2) BeSO_4 (3) BaSO_4 (4) SrSO_4

Scan or tap for the full solution



Q.12 Property of the alkaline earth metals that increases with their atomic number [AIPMT 2010 (Prelims)]

- (1) solubility of their hydroxides in water
(2) solubility of their sulphates in water
(3) ionization energy
(4) electronegativity

Scan or tap for the full solution



Q.13 Which one of the following compounds is a peroxide? [AIPMT 2010 (Prelims)]

- (1) KO_2 (2) BaO_2 (3) MnO_2 (4) NO_2

Scan or tap for the full solution



Q.14 The correct order of increasing thermal stability of K_2CO_3 , MgCO_3 , CaCO_3 and BeCO_3 is [AIPMT 2007]

- (1) $\text{BeCO}_3 < \text{MgCO}_3 < \text{CaCO}_3 < \text{K}_2\text{CO}_3$
(2) $\text{MgCO}_3 < \text{BeCO}_3 < \text{CaCO}_3 < \text{K}_2\text{CO}_3$
(3) $\text{K}_2\text{CO}_3 < \text{MgCO}_3 < \text{CaCO}_3 < \text{BeCO}_3$
(4) $\text{BeCO}_3 < \text{MgCO}_3 < \text{K}_2\text{CO}_3 < \text{CaCO}_3$

Scan or tap for the full solution



Q.15 In which of the following the hydration energy is higher than the lattice energy? [AIPMT 2007]

- (1) MgSO_4 (2) RaSO_4 (3) SrSO_4 (4) BaSO_4

Scan or tap for the full solution



Q.16 Mg is present in [AIPMT 2000]

- (1) chlorophyll (2) haemoglobin
(3) vitamin-D (4) vitamin-B

Scan or tap for the full solution



ANSWER KEY

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