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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.

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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

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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

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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

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Q.5 Which of the following oxides is most acidic in nature? [NEET 2018]

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

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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

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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.

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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.

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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

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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

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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) $SrSO_4$

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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

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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

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

(1) $BeCO_3 < MgCO_3 < CaCO_3 < K_2CO_3$

(2) $MgCO_3 < BeCO_3 < CaCO_3 < K_2CO_3$

(3) $K_2CO_3 < MgCO_3 < CaCO_3 < BeCO_3$

(4) $BeCO_3 < MgCO_3 < K_2CO_3 < CaCO_3$

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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) $BaSO_4$

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Q.16 Mg is present in [AIPMT 2000]

(1) chlorophyll (2) haemoglobin

(3) vitamin-D (4) vitamin-B

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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**						