

## PPSC Chemistry Full Book Test

Sr	Questions	Answers Choice
1	Which of the following is not a property of aluminium.	A. An efficient electrical conductor B. A low density compared to other metals C. Is amphoteric D. Toxic to humans
2	Aluminum is an active metal but does not corrode as iron does because.	A. Al does not react with O <sub>2</sub> B. A protective layer of Al <sub>2</sub> O <sub>3</sub> forms on the metal surface C. Al is harder to Oxidize than is Fe D. Aluminium has a high tensile strength
3	The Hall process involves the reduction of Al <sub>2</sub> O <sub>3</sub> to aluminium by	A. Carbon B. Carbon monoxide C. Molecular hydrogen D. Electrolysis
4	The role of the mineral cryolite Na <sub>2</sub> AlF <sub>6</sub> in the Hall process for aluminum production is.	A. It is the source of aluminum B. it is a chemical reducing agent C. It forms a slag to remove impurities D. In the molten state, it is a solvent for alumina Al <sub>2</sub> O <sub>3</sub>
5	Which of the following statement is incorrect.	A. An alloy is a mixture of two or more metals B. An alloy is a mixture of two or more metal and non metal elements that have metallic properties C. An alloy has a fixed composition D. An amalgam is an alloy containing Hg
6	Aluminium does not corrode as does iron because.	A. Al does not react with O <sub>2</sub> B. a-protective layer of Al <sub>2</sub> O <sub>3</sub> forms on the metal surface C. Al is harder to oxidize than is Fe D. Fe gives cathodic protection to Al
7	The element with maximum first ionization energy is.	A. B B. N C. O D. C
8	The most abundant metal in earth's crust is.	A. Fe B. Al C. Ti D. Ca
9	Which of the group 13 element does not form M (III) iodide.	A. Al B. Ga C. Ti D. In
10	In B <sub>2</sub> H <sub>6</sub> molecule	A. There exists a direct B-B $\sigma$ -bond B. All the atoms are in one plane C. All the B-H bonds are normal covalent bonds D. There exist two bonds between the boron atoms.
11	The aluminium salt commonly used to stop bleeding is	A. Aluminium sulphate B. Potash Alum C. Aluminium chloride D. Aluminium fluoride
12	Which liberates H <sub>2</sub> with NaOH	A. B B. Al C. Zn D. AlI
13	Which one of the following statements regarding BF <sub>3</sub> is not correct.	A. It is an ionic compound B. It is an electron deficient compound C. It is a Lewis acid D. It is a Lewis base

		D. $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ forms adducts
14	Anhydrous $\text{AlCl}_3$ cannot be obtained by heating hydrated $\text{Al}(\text{OH})_3 \cdot 6\text{H}_2\text{O}$ because.	<p>A. It decomposes completely to give <math>\text{Al}_2\text{O}_3</math></p> <p>B. It does not lose water completely</p> <p>C. It undergoes hydrolysis to give <math>\text{Al}(\text{OH})_3</math></p> <p>D. <math>\text{AlCl}_3 \cdot 6\text{H}_2\text{O}</math> is very stable.</p>
15	Which of the following statements is not true about potash alum.	<p>A. Its empirical formula is <math>\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}</math></p> <p>B. Its aqueous solution is basic in nature</p> <p>C. It is used in dyeing industry</p> <p>D. On heating it melts in its water of crystallization</p>
16	When orthoboric acid is heated strongly it gives.	<p>A. <math>\text{B}_2\text{O}_3</math></p> <p>B. <math>\text{H}_2\text{B}_3\text{O}_7</math></p> <p>C. <math>\text{HBO}_2</math></p> <p>D. B</p>
17	When borax is strongly heated, it gives	<p>A. <math>\text{B}_2\text{O}_4</math></p> <p>B. <math>\text{Na}_2\text{B}_4\text{O}_7</math></p> <p>C. <math>\text{NaBO}_2</math></p> <p>D. <math>\text{NaBO}_2 + \text{B}_2\text{O}_3</math></p>
18	In the Aluminothermite process, aluminium acts as.	<p>A. An oxidizing agent</p> <p>B. A reducing agent</p> <p>C. A flux</p> <p>D. A Solder</p>
19	In the electrolysis of alumina, cryolite is added to.	<p>A. Lower the melting point of alumina</p> <p>B. Increase the electric conductivity</p> <p>C. Minimize anode effect</p> <p>D. Remove impurities from alumina</p>
20	The major role of Fluorspar which is added in small quantities in the electrolytic reduction of alumina dissolved in fused cryolite is.	<p>A. As a catalyst</p> <p>B. To make the fused mixture very conducting</p> <p>C. To lower the temperature of the melt</p> <p>D. To decrease the rate of oxidation of carbon at the anode</p>
21	Hydrogen gas will not reduce	<p>A. Heated cupric oxide</p> <p>B. Heated ferric oxide</p> <p>C. Heated stannic oxide</p> <p>D. Heated aluminium oxide</p>
22	Concentrated aqueous sodium hydroxide can separate a mixture of.	<p>A. <math>\text{Al}^{3+}</math> and <math>\text{Sn}^{2+}</math></p> <p>B. <math>\text{Al}^{3+}</math> and <math>\text{Fe}^{3+}</math></p> <p>C. <math>\text{Al}^{3+}</math> and <math>\text{Zn}^{2+}</math></p> <p>D. <math>\text{Zn}^{2+}</math> and <math>\text{Pb}^{2+}</math></p>
23	Amorphous boron on burning in air forms	<p>A. <math>\text{B}(\text{OH})_3</math></p> <p>B. Only <math>\text{B}_2\text{O}_3</math></p> <p>C. Only BN</p> <p>D. Mixture of <math>\text{B}_2\text{O}_3</math> and BN</p>
24	Which of the following statements is not true for both B and Al	<p>A. They burn in oxygen to give oxides at high temperature</p> <p>B. Their halides are Lewis acids</p> <p>C. They combine with nitrogen to form nitrides</p> <p>D. They react with HCl to form chlorides.</p>
25	Which of the following statements about anhydrous aluminium chloride is correct.	<p>A. It exists as <math>\text{AlCl}_3</math> molecules</p> <p>B. It is not easily hydrolysed</p> <p>C. It sublimes at <math>100^\circ\text{C}</math> under vacuum</p> <p>D. Boron does not form <math>\text{B}^{3+}</math> ions</p>
26	$\text{AlCl}_3$ fumes in air because of.	<p>A. Hydrolysis</p> <p>B. Dehydration</p> <p>C. Hydration</p> <p>D. Oxidation</p>
27	Inert pair effect is that	<p>A. When an element shows inertness in chemical combination</p> <p>B. When higher oxidation state is more stable than lower oxidation state</p> <p>C. When an electron pair is present on the atom of an element</p> <p>D. When two s-electrons or outermost shell remain paired and do not participate in bonding</p>

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28 Boron does not form  $B^{3+}$  ion because.

- A. It has small size and high ionization energy
- B. It has high electronegativity
- C. It has high charge density
- D. None of the above

29 Alums are generally used

- A. In Dyeing and water proofing of fabric
- B. In arrest bleeding
- C. In water purification
- D. All above

30  $LiAlH_4$  is most useful reducing agent. It reduces to alcohol

- A. Aldehydes
- B. Ketone
- C. Carboxylic acid
- D. Any of above