



	(iii) With the largest atomic radius .Give the reason for your choice.																													
12.	<p>a) The electronic configuration of the element A is <math>1s^2 2s^2 2p^6 3s^2</math>.</p> <p>i) To which period it belongs?</p> <p>ii) Name the group to which it belongs?</p> <p>iii) Write down the formula of the carbonate of A.</p> <p>b) Write the oxidation state and covalency of Al in <math>[AlCl(H_2O)_5]^{2+}</math>.</p>	3																												
13.	<p>a) Write the IUPAC name of an element with <math>Z=114</math>.</p> <p>b) Which is smaller and why: <math>Al^{3+}</math> or Al. why?</p>	3																												
14.	What is meant by diagonal relationship? What are the factors on which it depends?	3																												
15.	<p>The first (<math>\Delta iH_1</math>) and the second (<math>\Delta iH_2</math>) ionization enthalpies (in kJ/mol) and the electron gain enthalpy (in kJ/mol) of a few elements are given below.</p> <table border="1" data-bbox="282 772 698 1077"> <thead> <tr> <th>Element</th> <th><math>\Delta iH_1</math></th> <th><math>\Delta iH_2</math></th> <th>egH</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>520</td> <td>7300</td> <td>-60</td> </tr> <tr> <td>II</td> <td>419</td> <td>3051</td> <td>-48</td> </tr> <tr> <td>III</td> <td>1681</td> <td>3374</td> <td>-328</td> </tr> <tr> <td>IV</td> <td>1008</td> <td>1846</td> <td>-295</td> </tr> <tr> <td>V</td> <td>2372</td> <td>5251</td> <td>+48</td> </tr> <tr> <td>VI</td> <td>738</td> <td>1451</td> <td>-40</td> </tr> </tbody> </table> <p>Which of the above elements is likely to be :</p> <p>(a) The least reactive element. (b) the most reactive metal.</p> <p>(c) the most reactive non-metal. (d) The least reactive non-metal.</p> <p>(e) The metal which can form a stable binary halide of the formula <math>MX_2</math>, (X=halogen).</p> <p>(f) The metal which can form a predominantly stable covalent halide of the formula <math>MX</math> (X=halogen)?</p>	Element	$\Delta iH_1$	$\Delta iH_2$	egH	I	520	7300	-60	II	419	3051	-48	III	1681	3374	-328	IV	1008	1846	-295	V	2372	5251	+48	VI	738	1451	-40	3
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