



CHEMISTRY

NCERT - FULL MARKS

CHEMISTRY(TAMIL)

P - BLOCK ELEMENTS

Problem

1. An element A belongs to 14th group and occupies period number 6. A reacts with conc.

HCl to give B an acid. A is used to prepare C which is used as an antiknock in automobiles. Identify the element A and the compounds B and C write the reactions



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2. An element A occupies group number 17 and period number 2, shows anomalous behaviour . A reacts with water forms a mixture of B,C and acid D. B and C are allotropes. A also reacts with hydrogen violently even in dark to

given an acid D. Identify A,B,C and D write the reactions.



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Self Evaluation A Choose The Correct Answer

1. Which of the following does not belong to group 13?

A. B

B. Al

C. Ge

D. In

Answer:



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2. Which of the following is most abundant in earth's crust?

A. C

B. Si

C. Ge

D. Sn

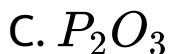
Answer:



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3. An element occupies group number 1 and period number 3. This element when exposed to air gives compound (A). The element with water forms compound (B). Which is a strong base and (A) with ammonia gives compound

(C) which is used as reducing agent in organic chemistry. The element reacts with an halogen and forms cooking salt (D). Identify A, B, C and D.

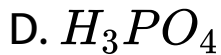
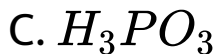
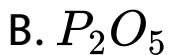
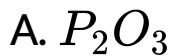


Answer:



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4. The compound with garlic odour is



Answer:



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5. Shape of ClF_3 is

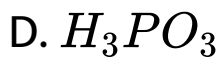
- A. pyramidal
- B. trigonal bipyramidal
- C. linear
- D. tetrahedral

Answer:



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6. The compound used as smoke screen



Answer:



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7. The stability of $+1$ oxidation state increases in the sequence

A. fluorine

B. bromine

C. chlorine

D. iodine

Answer:



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8. Among the halogen acid, the weakest acid is

A. HF

B. HCl

C. HBr

D. HI

Answer:



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9. Halogens belong to the group number

A. 14

B. 15

C. 17

D. 18

Answer:



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10. The noble gases are unreactive because they

- A. have same number of electrons
- B. have an atomicity of one
- C. are gases with low densities
- D. have stable electronic configuration.

Answer:



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11. The shape of XeF_4 is

- A. tetrahedral

B. octahedral

C. square planar

D. pyramidal

Answer:



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12. Which is not a monocot?

A. XeF_6

B. XeF_4



Answer:



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13. The lightest gas which is non-inflammable is



C. N_2

D. Ar

Answer:



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14. Which of the following has highest first ionisation energy?

A. He

B. Ne

C. Ar

D. Kr.

Answer:



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Self Evaluation B Answer In One Or Two Sentences

1. Write a note on plumbo solvency.



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2. H_3PO_3 is diprotic. Why?



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3. Draw the structure of hydathode



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4. Prove that P_2O_5 a powerful dehydrating agent.



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5. Why H_2O is a liquid while H_2S is a gas?



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6. Why the compounds of fluorine with oxygen are called fluorides of oxygen and not oxides of fluorine?



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7. Fluorine atom is more electronegative than iodine atom yet, HF has lower acid strength than HI. Explain?



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8. What are interhalogen compounds? How are they formed?



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9. Discuss the oxidising power of fluorine.



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10. How is XeF_6 prepared?



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11. Why do noble gases form compounds with fluorine and oxygen only?



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Self Evaluation C Answer Not Exceeding 60 Words

1. Write the uses of Neon?



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2. What are silicones? How are they prepared?

Mention its uses?



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3. Give an account of Mimicry.



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4. How are the following compounds prepared from phosphorus?

a) P_2O_3 b) P_2O_5 c) PCl_3 d) PCl_5 e) PH_3



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5. Give an account of various types of compounds which are formed by xenon?



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Self Evaluation D Practice Problems

1. An element A belongs to 14th group is a metal, which can be cut with a knife. It is not a good conductor of heat and electricity. A in

pure state does not react with water but air dissolved water forms hydroxide. Identify A.



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2. An element A occupies group number 15 and period number 3, exhibits allotropy and it is tetra atomic. A reacts with caustic soda to give B which is having rotten fish odour. A reacts with chlorine to give C which has a smell of garlic. Identify A, B and C. Write the reactions.



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3. An element A occupies group number 15 and period number 3, reacts with chlorine to give compound B. The compound B on hydrolysis gives a dibasic acid C. The compound C on heating undergoes auto oxidation and reduction to give a tribasic acid D. Identify the elements A, compounds B, C and D. Write the reactions.



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4. An element A occupies group number 17 and period number 2, is the most electronegative element. Element A reacts with another element B, Which occupies group number 17 and period number 4, to give a compound C. Compound C undergoes sp^3d^2 hybridisation and has octahedral structure. Identify the elements A and B and the compound C. Write the reactions.



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