



CHEMISTRY

NCERT - NCERT CHEMISTRY(TELUGU)

P-BLOCK ELEMENTS

Questions A Choose The Best Answer

1. The elements of group 13 to 18 of the periodic table are known as

- A. s - block elements
- B. p - block elements
- C. d - block elements

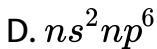
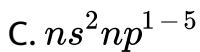
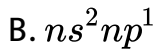
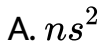
D. f - block elements

Answer:



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2. The general electronic configuration of group 18 elements is

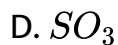
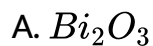


Answer:



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3. The basic oxide among the following is



Answer:



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4. Thermally most stable hydride among the following is



D. BiH_3

Answer:



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5. The formula of borax is

A. $NaBO_2$

B. $Na_2B_4O_7$

C. H_3BO_3

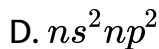
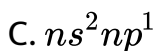
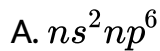
D. None of the above

Answer:



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6. The general electronic configuration of carbon group elements is



Answer:



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7. The process used for the manufacture of ammonia is

A. Contact process

B. Ostwald process

C. Haber's process

D. Linde's process

Answer:



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8. The oxides of non-metals are usually

A. ionic

B. coordinate

C. covalent

D. none of the above

Answer:



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9. Metallic oxides are generally

- A. acidic
- B. basic
- C. amphoteric
- D. neutral

Answer:



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10. Fixation of nitrogen is a source for

- A. Various oxygen compounds
- B. Various phosphorus compounds

C. Various nitrogen compounds

D. Various sulphur compounds

Answer:



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11. The oxyacid of nitrogen which is used in the manufacture of azo dyes.

A. Nitrous acid

B. Nitric acid

C. Hyponitrous acid

D. Pernitric acid

Answer:



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12. The hydride of V group element which is used in the manufacture of artificial silk

- A. ammonia
- B. stibine
- C. phosphine
- D. bismuthine

Answer:



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13. Anaesthetic used for minor operation dentistry

- A. nitrous oxide
- B. nitric oxide
- C. nitrous oxide + oxygen
- D. nitrogen dioxide

Answer:



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14. An allotrope of carbon discovered by Richard Smalley et al.

- A. graphite
- B. diamond
- C. fullerene
- D. carbon black

Answer:

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Questions B Fill In The Blanks

1. The general electronic configuration of group III elements

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2. Boron combines with nitrogen to form _____ .

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3. _____ is used to identify the metallic radicals in the qualitative analysis.



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4. _____ is known as 'inorganic benzene'.



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5. In diamond, every carbon atom is bonded with the other by _____ bond.



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6. C_{60} Buckminster fullerene was nicknamed as _____ .



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7. Carbon tetrachloride_____hydrolysis.



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8. Neutron was discovered by



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9. Nitric acid means_____.



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10. Oxidising power of nitric acid_____with dilution.



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11. Dioxygen is also called as _____ .



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12. Atomic oxygen combines with molecular oxygen to give _____



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13. The ozoniser commonly used in the preparation of ozone are and _____.



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14. Ozone can liberate a _____ oxygen easily.

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15. _____ is used in the manufacture of synthetic camphor.

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Questions C Match The Following

- | | |
|-------------|-------------------------|
| 1. Borax | a. Allotrope of carbon |
| 2. Graphite | b. $Na_2B_4O_7$ |
| 3. ZnO | c. Ozone |
| 1. 4. CFCs | d. Neutral oxide |
| 5. NH_3 | e. Fertilizer |
| | f. Fixation of nitrogen |

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2.

- | | |
|----------------------|-------------------------------------------|
| 1. Inert pair effect | a. Nitric acid |
| 2. Oxyacid | b. Cell fuel |
| 3. Liquid nitrogen | c. Stabilisation of lower oxidation state |
| 4. Ostwald process | d. Ozone |
| 5. Molecular oxygen | e. Platinum gauze |
| | f. Refrigerant |



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Borax bead test

- | | |
|-----------------|----------------|
| 1. Copper | a. Blue |
| 2. Iron | b. Grey |
| 3. 3. Manganese | c. Red |
| 4. Cobalt | d. Bottlegreen |
| 5. Chromium | e. Colorless |
| | f. Green |



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Questions D Write In One Or Two Sentence

1. Mention the reasons for the stabilisation of lower oxidation state of p-block element.



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2. Show the electron accepting property of boron trifluoride by giving an example.



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3. Give an example of monovalent and trivalent element in group III.



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4. Why diamond is hard compared with graphite?

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5. Why Boron family has a tendency to form hydrides?

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6. Why boron cannot form B^{3+} ion ?

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7. NH_3 has a much higher boiling point than PH_3 because

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8. NH_3 is soluble in water whereas other hydrides of group 15 elements are insoluble in water. Why?

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9. Which is considered to be "earth's protective umbrella"?

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10. Mention any 3 uses of ozone.

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11. What are CFC's? Mention its environmental action.

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12. What are compound oxides? Give an example.

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13. Mention the metal ions present in haemoglobin and myoglobin and state its function.

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14. What happens when ozone reacts with

a) lead sulphide

b) potassium manganate

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Questions E Explain Briefly On The Following

1. Explain inert pair effect.

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2. Give an account of nature of hydrides of 15th group elements.

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3. How is boron extracted from borax?

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4. What happens when boron reacts with

a) conc. H_2SO_4 b) conc. HNO_3 c) SiO_2



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5. How is borax prepared from colemanite?



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6. How borax bead test is helpful in identifying basic radicals in qualitative analysis?



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7. Discuss the structural difference between diamond and graphite.



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8. Write a short note on fixation of nitrogen.



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9. How is nitric acid manufactured by Ostwald's process ?



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10. Why silicon carbide is used as an abrasive?



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11. How molecular oxygen is important for all oxygenated animals?



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12. How ozone reacts with the following (a) PbS (b) $KmnO_4$



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Problem Solution

1. An element occupies group no.13 and period number 2 is a representative element of that group reacts with carbon dioxide and forms an oxide (A). (A) reacts with $CuSO_4$ give blue beads

(B). Identify the element compound (A) and (B). Write the reaction.



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Problem For Practice

1. BF_3 reacts with LiH and forms a compound A. The compound A reacts with water to give the compound B. A reacts with ammonia at 390 K and form C. Identify (A), (B) and (C).



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2. An element occupies group number 15 and period number 2 reacts with hydrogen under high pressure and in the presence of a catalyst it forms a hydride (A). In presence of excess of air

and in the presence of platinum it forms an oxyacid (B). Identify the element, A and B.

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3. An element occupies group No.16 and period number 2. This element on passing through silent electric discharge forms (A). (A) also reacts with lead sulphide and forms (B). (A) also reacts with BaO_2 and forms (C). It reacts with H_2O_2 and forms (D). Identify the element (A), (B), (C) and (D).

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4. An element occupies group No.14 and period number 2 exists in different allotropic forms. One form of this element has lubricating property (A). Another form is the hardest substance

(B). New allotrope of this element is named as 'Buckyball' (C) and it is superconducting. Identify the element, (A) (B) and (C).



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