



CHEMISTRY

NCERT - FULL MARKS CHEMISTRY(TAMIL)

D-BLOCK ELEMENTS

Self Evaluation Mcqs

1. The general electronic configuration of d- block element is _____

A. $(n - 1)d^{1-10}ns^{0-2}$

B. $(n - 1)d^{1-5}ns^2$

C. $(n - 1)d^0ns^1$

D. None of these

Answer:



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2. Decolourisation of coloured compounds can be effected by using

- A. paired electrons
- B. unpaired electrons
- C. lone pairs of electrons
- D. none of the above

Answer:

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3. Paramagnetism is the property of

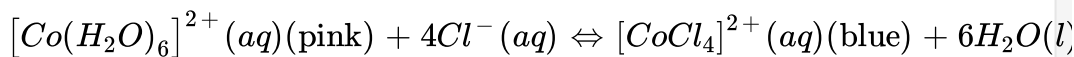
- A. p-block elements
- B. d-block elements
- C. s-block elements

D. f-block elements

Answer:

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4.



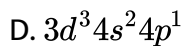
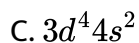
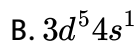
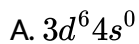
In the above reaction at equilibrium, the reaction mixture is blue in colour at room temperature. On cooling this mixture, it becomes pink in colour. On the basis of this information, which one of the following is true?

- A. d-d transition
- B. Presence of water molecules
- C. Inter atomic transfer of electrons
- D. None of the above

Answer:

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5. Correct electronic configuration of Cr is



Answer:



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6. Paramagnetism is the property of

A. paired electrons

B. completely filled electronic subshells

C. unpaired electrons

D. completely vacant electronic subshells

Answer:



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7. d- block elements form _____ compounds

- A. They absorb some energy for d-s transition
- B. They absorb some energy for p-d transition
- C. They absorb some energy for d-d transition
- D. They do not absorb any energy

Answer:



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8. The electronic configuration of copper is _____.

A. $3d^{10}4s^1$

B. $3d^{10}4s^2$

C. $3d^94s^2$

D. $3d^54s^24p^4$

Answer:



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9. The name copper was taken from _____

A. cuprite

B. copper glance

C. malachite

D. copper pyrites

Answer:



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10. Silver salt used in photography is

A. AgCl

B. $AgNO_3$

C. AgF

D. AgBr

Answer:



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11. Silver salt used in photography is

A. Oxidizing behaviour

B. Reducing behaviour

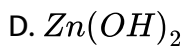
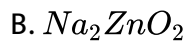
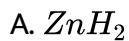
C. Complexing behaviour

D. Photochemical behaviour

Answer:

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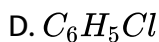
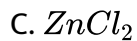
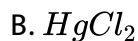
12. Excess of sodium hydroxide reacts with zinc to form



Answer:

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13. Which of the following compounds will not give positive chromyl chloride test?

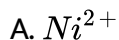


Answer:



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14. Which of the ions will give colourless aqueous solution?

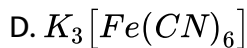
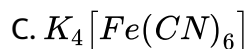
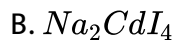
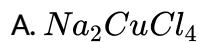


Answer:



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15. Which one of the following compounds is not formed ?



Answer:



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16. Select the wrong statement from the following:

A. All cuprous salts are blue in colour

- B. Transition metals are highly reactive
- C. All cuprous salts are white in colour
- D. Mercury is a liquid metal

Answer:

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17. Choose the wrong statement

- A. It is a powerful oxidizing agent
- B. It is used in tanning industry
- C. It is soluble in water
- D. It reduces ferric sulphate to ferrous sulphate

Answer:

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18. For a transition metal ion, the effective magnetic moment in BM is given by the formula

A. $\sqrt{n(n - 1)}$

B. $\sqrt{n(n + 1)}$

C. $\sqrt{n(n + 2)}$

D. $\sqrt{n(n + 1)(n + 2)}$

Answer:



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19. How d-block elements are classified?

A. They are all metals.

B. They show variable valency.

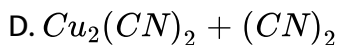
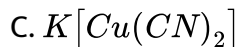
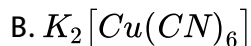
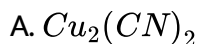
C. They form coloured ions and complex salts.

D. All above statement are correct.

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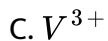
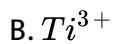
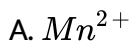
20. Which compound is formed when excess of KCN is added to an aqueous solution of copper sulphate



Answer:

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21. Which of the following has the maximum number of unpaired electrons?



Answer:

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22. Among the following statement, the correct one is

A. Calamine and siderite are carbonates.

B. Argentite and cuprite are oxides.

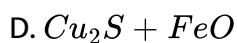
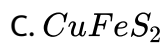
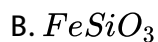
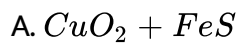
C. Zinc blende and pyrites are sulphides.

D. Malachite and azurite are ores of copper.

Answer:

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23. Chemical composition of chromosome is



Answer:



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24. This transition element with the lowest atomic number is

A. Scandium

B. Titanium

C. Zinc

D. Lanthanum

Answer:



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25. Which transition element show highest oxidation state

A. Sc

B. Ti

C. Os

D. Zn

Answer:



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Self Evaluation Answer In One Or Two Sentences

1. What are d-block elements? Why are they called so?

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2. What are d-block elements? Why are they called so?

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3. How d-block elements are classified?

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4. Why transition elements form complexes ? (OR) why do d-block elements form complexes ?

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5. Which of the following ions has maximum magnetic moment?

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6. Why Zn^{2+} salts are white while Ni^{2+} salts are coloured?

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7. $[Ti(H_2O)_6]^{3+}$ is coloured, while $[Sc(H_2O)_6]^{3+}$ is colourless -explain

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8. A substance is found to have a magnetic moment of 3.9 BM. How many unpaired electrons does it contain?

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9. NH_3 has exceptionally high melting point and boiling point as compared to those of the hydrides of the remaining element of group 15.

Explain.

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10. Which is more stable? Fe^{3+} or Fe^{2+} - explain.

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11. Name any two alloys of copper and Give its uses.

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12. Write short notes on aluminothermic process?

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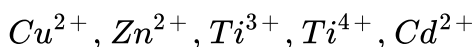
13. Name the first and last element in the second transition series.

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14. Name the lightest and the heaviest elements (in terms of density) among the transition elements.

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15. Which of the following ions would form colourless complexes?



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16. What is the action of heat on copper sulphate crystals?

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17. When ethyl iodide is treated with dry silver oxide it forms

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18. Zinc is obtained from ZnO by

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19. Explain how dichromate is extracted from its chromite ore. Write the balanced chemical equation for the reaction between an acidified solution of $K_2Cr_2O_7$ and KI .

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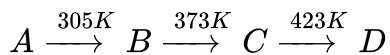
Self Evaluation Exercise Problems

1. The chief ore of Zinc, on roasting gave a compound A, which on reduction by carbon, gives B. Identify A and B, give the chemical reactions.



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2. A sulphate compound of group 11. This compound is also called as Blue vitriol. The compound undergoes decomposition at various temperature



Identify the compounds A, B, C and D.



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