



CHEMISTRY

BOOKS - USHA CHEMISTRY (ODIA ENGLISH)

PREVIOUS YEAR QUESTION 2016

Previous Year Question

1. What are the Monomers used for preparing Buna-S ?

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2. What is Oleum ? Write its formula.

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3. Write the unit of cell constant.

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4. What is the shape of XeF_2 molecule ?

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5. Name the compound precipitated when excess of bromine water is added to aniline.

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6. Toluene on oxidation with CrO_2Cl_2 gives _____ and the reaction is called _____

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7. The unit of rate constant for a zero order reaction is _____

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8. Drug used in bringing down the body temperature in high fever is called _____

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9. Isotopes having positive packing fraction indicates _____ of the nucleus.

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10. $Ni(CO)_4$ is an example of _____ and _____ bonded organo metallics.

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11. Suggest a chemical test to distinguish between pentan-2-one and pentan-3-one. Give equation.

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12. How is toluene converted to benzene ?

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13. What is Cannizzaro's reaction? Give equation.

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14. Why HF cannot be stored in glass bottle ?

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15. How is ferric chloride prepared ? Explain why it is acidic.

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16. Why hydrogen sulphide cannot be dried by conc. H_2SO_4 ?

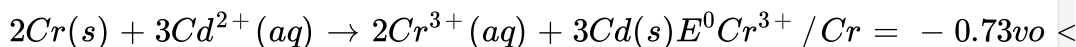
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17. Represent the cell and calculate the Standard e.m.f. of the cell having

following

cell

reaction:



and $E^0 Cr^{3+} / Cr = -0.73$ volt

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18. The aqueous solution of which amongst the following is the most acidic and why? HF, HCl, HBr, HI

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19. State the Law of mass action and explain any two significance of equilibrium constant.

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20. How does common ion effect help in the preparation of pure NaCl from an impure variety ?

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21. "Direct iodination of benzene is difficult." Explain. Suggest an alternative route for the synthesis of iodo benzene.

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22. Write the structural formulae of the three derivatives of monocarboxylic acid. Identify the functional group present in them.

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23. Equivalent conductance at infinite dilution of NH_4Cl , NaOH and NaCl are 129.8, 217.4 and 108.45 $mho\ cm^2\ gm\ equivalent^{-1}$ respectively. Calculate the equivalent conductance of HN_4OH at infinite dilution.

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24. What is a Buffer solution? Derive Hendersen's equation for calculation of the pH Of a basic buffer.

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25. The half-life of a radioactive element is 69.3 days. Find out the time taken for a given sample of the element to be reduced to $\frac{1}{100^{th}}$ of its initial activity.

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26. The half - life of a radioactive element is 69.3 days. Find out the time taken for a given sample to the element to be reduced to $\frac{1}{10^{th}}$ of its initial activity.

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27. What is Diazo reaction ? Write the structure of the product of this reaction. Using this reaction how the following compounds are prepared?
(i) Benzene (ii) Fluorobenzene

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28. How is acetaldehyde prepared from acetylchloride?

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29. How does acetaldehyde react with Tollen's reagent

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30. How does acetaldehyde react with Phenyl hydrazine ?

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31. Arrange the order of reactivity of the following compounds towards nucleophiles: CH_3CHO , $(CH_3)_2CO$, $HCHO$

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32. Describe the laboratory method of preparation of sulphur dioxide.

How does it react with acidified $KMnO_4$ solution and chlorine water ?

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33. Define transition elements. Discuss their following characteristic properties (i) Formation of coloured compounds (ii) Magnetic property

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34. Define specific, equivalent and molar conductance. Write their units.

Derive the relation between specific conductance and molar conductance.

What is the effect of dilution on specific and equivalent conductance?

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35. Write notes on: Hess's law of constant heat of summation.



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36. Which one of the following compound is a protein ?

- A. Penicillin
- B. Orlon
- C. Keratin
- D. Savlon.

Answer:



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37. Which one is the ore of copper ? (a) Bauxite (b) Dolomite (c) haematite

(d) Chalcopyrite

- A. Bauxite
- B. Dolomite

C. Haematite

D. Chalcopyrite

Answer:

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38. In Hofmann-bromamide reaction an amide is converted to - (a) primary amine (b) secondary amine (c) tertiary amine (d) aldehyde

A. Primary amine

B. Secondary amine

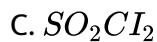
C. Tertiary amine

D. Aldehyde

Answer:

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39. Which of the following reagents produces pure acid-chloride from monocarboxylic acid ?



Answer:



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40. Nitration of nitrobenzene yields -

A. o-dinitrobenzene

B. m-dinitrobenzene

C. p-dinitrobenzene

D. 1,2,3 - trinitrobenzene

Answer:



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41. The disease nightblindness is caused due to the deficiency of -

- A. Vitamin-A
- B. Vitamin- B_1
- C. Vitamin- B_2
- D. Vitamin-C

Answer:



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42. Which of the following is a monosaccharide ?

- A. Lactose

B. Maltose

C. Fructose

D. Cellulose

Answer:



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43. Which one of the following reaction involves both aryl and alkyl halide ?

A. Wurtz reaction

B. Wurtz-Fittig reaction

C. Sandmeyer reaction

D. Friedel-Craft reaction

Answer:



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44. Oxygen is not evolved when ozone reacts with -

A. KI

B. SO_2

C. $SnCl_2$

D. PbS

Answer:



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45. A detergent is - (a) drug (b) catalyst (c) soap (d) surface active agent

A. Drug

B. Catalyst

C. Soap

D. Surface active agent

Answer:



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