



CHEMISTRY

BOOKS - SHARAM PUBLICATION

2016 QUESTION PAPER

Exercise

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

A. Vitamin - A

B. *Vita* min - B_1

C. Vitamin - B_{12}

D. Vitamin D

Answer:



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2. Which of the following is a monosaccharide ?

A. Sucrose

B. Maltose

C. Fructose

D. Cellulose

Answer:



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3. 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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4. Oxygen is not evolved when ozone reacts with -

A. KI

B. SO_2

C. $SnCl_2$

D. PbS

Answer:

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5. A detergent is

A. drug

B. Antibiotic

C. Soap

D. Surface active agent

Answer:



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

A. Penicilin

B. Orion

C. Keratin

D. Savlon

Answer:



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7. Which one is the ore of copper ?

- A. Bauxite
- B. Dolomite
- C. Haemattite
- D. Chalcopyrite

Answer:



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8. In Hofmann - bromamide reaction an amide is converted to -

- A. Primary amine
- B. Alcohol
- C. Ketone

D. Aldehyde

Answer:

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

A. PCl_3

B. PCl_5

C. SO_2Cl_2

D. $SOCl_2$

Answer:

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10. Nitration of nitrobenzene yields -

A. o - dinitrobenzene

B. m - dinitrobenzene

C. p - dinitrobenzene

D. 1,2,3 trinitrobenzene

Answer:

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11. What is the shape of XeF_2 molecule ?

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12. Which compound is precipitated when excess of bromine water is added to aniline?

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13. What are the Monomers used for preparing Buna -N ?

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14. Write the unit of cell constant.

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

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

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

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

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

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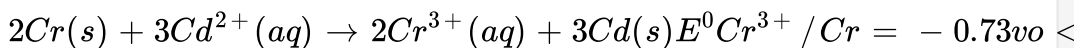
20. How is ferric chloride prepared ? Explain why it is acidic.

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

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22. 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
and $E^0 Cd^{2+} / Cd = -0.40$ volt

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

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

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

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26. Correctly match list - I with list - II :

List-I

- A. Terylene
- B. Insulin
- C. Lecithin
- D. Lindane

List -II

- 1. Insecticide
- 2. Lipid
- 3. Hormone
- 4. Polymer
- 5. Carbohydrate

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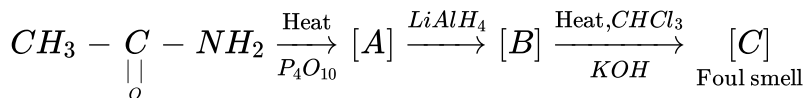
27. Suggest a chemical test to distinguish between pentan-2-one and pentan-3-one. Give equation.

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28. How is toluene converted to benzene ?

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29. Identify A, B, C and name the reaction involved in the transformation of B to C.



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

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31. Why HF cannot be stored in glass bottle ?

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

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34. 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 $\frac{1}{10^{th}}$ of its initial activity.

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

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

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37. 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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38. Define transition elements. Discuss their following characteristic properties : Formation of coloured compounds

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39. Define transition elements. Discuss their following characteristic properties : Magnetic property

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

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42. Write notes on :

Solubility product and its application to analysis of Group -II and Group - III (B) basic radicals.

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43. 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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45. How is acetaldehyde prepared from acetylchloride?

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46. How does acetaldehyde react with Tollen's reagent

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47. How does acetaldehyde react with Phenyl hydrazine ?

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



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