



CHEMISTRY

BOOKS - SUNSTAR CHEMISTRY (KANNADA ENGLISH)

K-CET-CHEMISTRY - 2018

Multiple Choice Question

1. H_2O_2 is

A. An oxidising agent

B. A reducing agent

C. Both oxidising and reducing agent

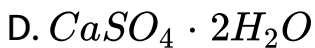
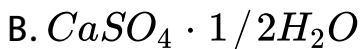
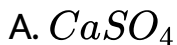
D. Neither oxidising nor reducing agent

Answer: C



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2. Dead burnt plaster is



Answer: A



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3. Identify the following compound which exhibits geometrical isomerism:

A. But-2-ene

B. But-1-ene

C. Butane

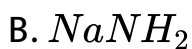
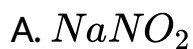
D. Isobutane

Answer: A



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4. During the fusion of organic compound with sodium metal, nitrogen present in the organic compound is converted into



Answer: C



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5. The reagent .X. used for the following reaction is



A. Ni

B. Pd/C

C. $LiAlH_4$

D. Na/Liquid NH_3

Answer: B



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6. Which of the following ions will cause hardness in water

?

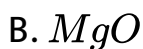
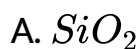


Answer: A



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7. Which of the following oxides shows electrical properties like metals?



C. $SO_2(s)$

D. CrO_2

Answer: D



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8. Which of the following aqueous solutions should have the highest boiling point?

A. 1.0 M NaOH

B. 1.0 M Na_2SO_4

C. 1.0 M NH_4NO_3

D. 1.0 M KNO_3

Answer: B



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9. The charge required for the reduction of 1 mole of MnO_4^- to MnO_2 is

A. 1F

B. 3F

C. 5F

D. 7F

Answer: B



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10. For the reaction , $2SO_2 + O_2 \rightleftharpoons 2SO_3$,

the rate of disappearance of O_2 is $2 \times 10^{-4} \text{mol L}^{-1} \text{s}^{-1}$.

The rate of appearance of SO_3 is

A. $2 \times 10^4 \text{mol L}^{-1} \text{s}^{-1}$

B. $4 \times 10^{-4} \text{mol L}^{-1} \text{s}^{-1}$

C. $1 \times 10^{-4} \text{mol L}^{-1} \text{s}^{-1}$

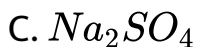
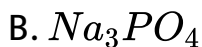
D. $6 \times 10^{-4} \text{mol L}^{-1} \text{s}^{-1}$

Answer: B



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11. Which of the following electrolytes will have maximum coagulating value for AgI / Ag^+ sol ?



Answer: D



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12. Electrolytic refining is used to purify which of the following metals?

A. Cu and Zn

B. Ge and Si

C. Zr and Ti

D. Zn and Hg

Answer: A



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13. Dry ice is

A. Solid CO

B. Solid SO_2

C. Solid CO_2

D. Solid O_2

Answer: C

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14. Which of the following is an amphoteric oxide ?

A. V_2O_5 , Cr_2O_3

B. Mn_2O_7 , Cr_2O_3

C. CrO , V_2O_5

D. V_2O_5 , V_2O_4

Answer: A

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15. The IUPAC name of $[Co(NH_3)_4Cl(NO_2)]Cl$ is

- A. tetraamminechloridonitrito-N-cobalt(III) chloride
- B. tetraamminechloridonitrocobalt(II) chloride
- C. tetraamminechloridonitrocobalt(I) chloride
- D. tetraamminechloridodinitrocobalt(III) chloride

Answer: A



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16. Which of the following statements is true in case of alkyl halides?

- A. They are polar in nature
- B. They can form hydrogen bonds
- C. They are highly soluble in water
- D. They undergo addition reactions

Answer: A

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17. Phenol can be distinguished from ethanol by the reagent

- A. Bromine water
- B. Sodium metal

C. Iron metal

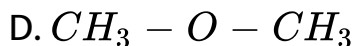
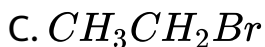
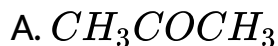
D. Chlorine water

Answer: A



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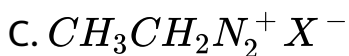
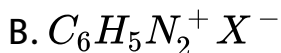
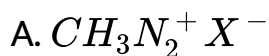
18. Which of the following compounds undergoes haloform reaction ?



Answer: A

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19. Which of the following will be the most stable diazonium salt ($RN_2^+ X^-$) ?



Answer: B

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20. Which of the following bases is not present in DNA?

A. Adenine

B. Guanine

C. Cytosine

D. Uracil

Answer: D



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21. Which one of the following is a polyamide polymer ?

A. Terylene

B. Nylon-6,6

C. Buna-S

D. Bakelite

Answer: B



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22. In F.C.C. the unit cell is shared equally by how many unit cells ?

A. 10

B. 8

C. 6

D. 2

Answer: C

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23. At a particular temperature, the ratio of molar conductance to specific conductance of 0.01 M NaCl solution is

A. $10^5 \text{ cm}^3 \text{ mol}^{-1}$

B. $10^3 \text{ cm}^3 \text{ mol}^{-1}$

C. $10 \text{ cm}^3 \text{ mol}^{-1}$

D. $10^5 \text{ cm}^2 \text{ mol}^{-1}$

Answer: A

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24. Isotonic solutions are solutions having the same

- A. Surface tension
- B. Vapour pressure
- C. Osmotic pressure
- D. Viscosity

Answer: C

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25. The temperature coefficient of a reaction is 2. When the temperature is increased from 30°C to 90°C , the rate of reaction is increased by

A. 150 times

B. 410 times

C. 72 times

D. 64 times

Answer: D



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26. Gold sol is not a

- A. Lyophobic sol
- B. Negatively charged sol
- C. Macromolecular sol
- D. Multimolecular colloid

Answer: C



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27. The common impurity present in bauxite is

- A. CuO
- B. ZnO
- C. Fe_2O_3

D. Cr_2O_3

Answer: C

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28. Very pure N_2 can be obtained by

- A. Thermal decomposition of ammonium dichromate
- B. Treating aqueous solution of NH_4Cl and $NaNO_2$
- C. Liquifaction and fractional distillation of liquid air
- D. Thermal decomposition of sodium azide

Answer: D

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29. Which of the following oxidation states is common for all lanthanides?

A. +2

B. +3

C. +4

D. +5

Answer: B



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30. The electronic configuration of transition element "X", is +3, oxidation state is $[Ar]3d^5$. What is its atomic number?

A. 25

B. 26

C. 27

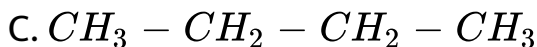
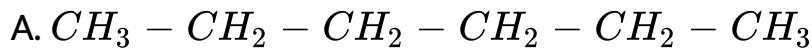
D. 24

Answer: B



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31. n-Propyl chloride reacts with sodium metal in dry ether to give



D.



Answer: A



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32. When the vapours of tertiary butyl alcohol are passed through heated copper at 573 K, the product formed is

- A. But-2-ene
- B. 2-Butanone
- C. 2-Methyl propene
- D. Butanal

Answer: C

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33. What is the increasing order of acidic strength among the following ?

(i) p-methoxy phenol

(ii) p-methyl phenol

(iii) p-nitro phenol

A. $ii < iii < i$

B. $iii < ii < i$

C. $i < ii < iii$

D. $i < iii < ii$

Answer: C



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34. Which of the following is more basic than aniline ?

- A. Diphenylamine
- B. Triphenylamine
- C. p-nitroaniline
- D. Benzylamine

Answer: D

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35. The two forms of D-Glucopyranose are called

- A. Diastereomers
- B. Anomers
- C. Epimers

D. Enantiomers

Answer: B

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36. Among the following, the branched chain polymer is

- A. Polyvinyl chloride
- B. Bakelite
- C. Low density polythene
- D. High density polythene

Answer: C

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37. Edge length of a cube is 300 pm. Its body diagonal would be

A. 600 pm

B. 423 pm

C. 519.6 pm

D. 450.5 pm

Answer: C



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38. Which of the following is not a conductor of electricity ?

A. Solid NaCl

B. Cu

C. Fused NaCl

D. Brine solution

Answer: A



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39. For a cell involving two electron changes, $E_{\text{cell}}^{\circ} = 0.3V$ at $25^{\circ}C$. The cell equilibrium constant of the reaction is

A. 10^{-10}

B. 3×10^{-2}

C. 10

D. 10^{10}

Answer: D



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40. The value of rate constant of a pseudo first order reaction

A. Depends only on temperature

- B. Depends on the concentration of reactants present
in small amounts
- C. Depends on the concentration of reactants present
in excess
- D. Is independent of the concentration of reactants

Answer: D

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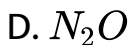
41. $(CH_3)_3SiCl$ is used during polymerization of organosilicons because

- A. The chain length of organosilicon polymers can be controlled by adding $(CH_3)_3SiCl$
- B. $(CH_3)_3SiCl$ improves the quality and yield of the polymer
- C. $(CH_3)_3SiCl$ does not block the end terminal of silicone polymer
- D. $(CH_3)_3SiCl$ acts as a catalyst during polymerisation

Answer: A

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42. When PbO_2 reacts with concentrated HNO_3 , the gas evolved is



Answer:

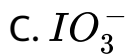


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43. $KMnO_4$ acts as an oxidising agent in alkaline medium.

When alkaline $KMnO_4$ is treated with KI, iodide ion is oxidised to





Answer: C



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44. $[Fe(NO_2)_3Cl_3]$ and $[Fe(O - NO)_3Cl_3]$ shows

A. Linkage isomerism

B. Geometrical isomerism

C. Optical isomerism

D. Hydrate isomerism

Answer: A



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45. Tertiary alkyl halide is practically inert to substitution by S_N2 mechanism because of

- A. Insolubility
- B. Instability
- C. Inductive effect
- D. Steric hindrance

Answer: D



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46. The products X and Z in the following reaction sequence are



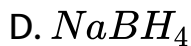
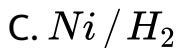
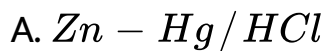
- A. Isopropylbenzene and acetone
- B. Cumene peroxide and acetone
- C. Isopropylbenzene and isopropyl alcohol
- D. Phenol and acetone

Answer: A



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47. The appropriate reagent for the following transformation is



Answer: B



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48. In the following reaction



the compound Z is

- A. Benzoic acid
- B. Acetophenone
- C. Benzaldehyde
- D. Benzene

Answer: B



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49. The reaction of Benzenediazonium chloride with aniline yields yellow dye. The name of the yellow dye is

- A. p-Hydroxyazobenzener
- B. p-Aminoazobenzene
- C. p-Nitroazobenzene
- D. o-Nitroazobenzene

Answer: B

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50. The glycosidic linkage involved in linking the glucose units in amylose part of starch is

A. $C_1 - C_4\beta$ - linkage

B. $C_1 - C_6\alpha$ -linkage

C. $C_1 - C_6\beta$ -linkage

D. $C_1 - C_4\alpha$ -linkage

Answer: D



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51. Ziegler-Natta catalyst is used to prepare

A. Low-density polythene

B. Teflon

C. High density polythene

D. Nylon-6

Answer: C

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52. 1.0 g of Mg is burnt with 0.28 g of O_2 in a closed vessel.

Which reactant is left in excess and how much ?

A. Mg, 5.8 g

B. Mg, 0.58 g

C. O_2 , 0.24g

D. O_2 , 2.4g

Answer: B

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53. The orbital nearest to the nucleus is

A. 4f

B. 5d

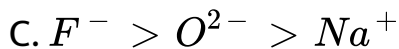
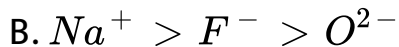
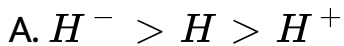
C. 4s

D. 7p

Answer: C

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54. Which of the following is the correct order of radius?



Answer: A



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55. The intramolecular hydrogen bond is present in

A. Phenol

B. o-Nitrophenol

C. p-Nitrophenol

D. p-Cresol

Answer: B

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56. The state of hybrid orbitals of carbon in CO_2 , CH_4 and CO_3^{2-} respectively is

A. sp^3 , sp^2 and sp

B. sp^3 , sp and sp^2

C. sp , sp^3 and sp^2

D. sp^2 , sp^3 and sp

Answer: C

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57. For an ideal gas, compressibility factor is

A. 0

B. 1

C. -1

D. $+2$

Answer: B

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58. The relationship between K_p and K_c is $K_p = K_c(RT)^{\Delta n}$. What would be the value of Δn for the reaction $NH_4Cl(s) \rightleftharpoons NH_3(g) + HCl(g)$?

A. 1

B. 0.5

C. 1.5

D. 2

Answer: D



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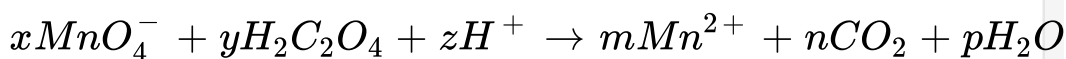
59. Acidity of BF_3 , can be explained on which of the following concepts ?

- A. Arrhenius concept
- B. Bronsted-Lowry concept
- C. Lewis concept
- D. Bronsted-Lowry as well as Lewis concept

Answer: C

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60. For the redox reaction



The value of x , y , m and n are

A. 10, 2, 5, 2

B. 2, 5, 2, 10

C. 6, 4, 2, 4

D. 3, 5, 2, 10

Answer: B



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