



CHEMISTRY

BOOKS - KCET PREVIOUS YEAR PAPERS

MODEL TEST PAPER 10

Chemistry

1. Which halide does not give a precipitate with alcoholic $AgNO_3$

A. Allyl chloride

B. Benzyl chloride

C. Chlorobenzene

D. t-butyl chloride

Answer: C



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2. Hydrogen bond is strongest in

A. $F - H - - - O$

B. $S - H - - - O$

C. $F - H - - - F$

D. $O - H - - - S$

Answer: C



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3. Which one would give H_2O_2 with HCl ?

A. NO_2

B. MnO_2

C. BaO

D. None

Answer: D



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4. Ionic , covalent and coordinate bonds are present in

A. Potassium bromide

B. Water

C. Sodium cyanide

D. Ammonium chloride

Answer: D



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5. Ethyl amine reacts with HNO_2 to form

A. C_2H_5OH

B. Ethyl nitrate

C. CH_3OH

D. Ethane

Answer: A



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6. K_{sp} for sodium chloride is $36 \text{ mol}^2 / \text{litre}^2$.

The solubility of sodium chloride is

A. $6M$

B. $\frac{1}{6}M$

C. $3600M$

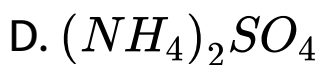
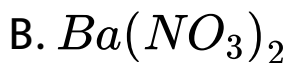
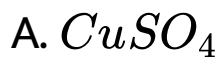
D. $\frac{1}{36}$ M

Answer: A



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7. Which gives a neutral solution in water ?

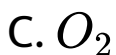


Answer: B



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8. Electrolysis of aqueous copper sulphate solution liberates which of the following gases at the anodes ?



Answer: C



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9. Standard reduction potentials of three metals electrodes A,B, and C are 0.34V,-0.40V and -0.47V respectively . Which is the best reducing agent ?

A. A

B. B

C. C

D. None

Answer: C



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10. Oxidation number of N in NOCl is

A. + 2

B. + 4

C. + 3

D. + 1

Answer: C



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11. The gravimetric composition of water as H:O is

A. 1 : 16

B. 1 : 2

C. 1 : 8

D. 1 : 1

Answer: C



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12. Which has the lowest anion to cation size ratio ?

A. NaF

B. CsI

C. CsF

D. LiF

Answer: C



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13. Transition of electron from $n=3$ to $n=1$ level results in

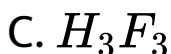
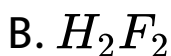
- A. Infrared spectrum
- B. Emission spectrum
- C. Band spectrum
- D. X-ray spectrum

Answer: B



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14. 10 g of hydrochloric acid gas occupies 5.6 litre of volume at STP . The empirical formulae of the gas is HF , then its molecular formula in the gaseous state will be



D. H_4F_4

Answer: B



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15. The standard heat of formation in kcal/mol of $NO_{2(g)}$ and $N_2O_{4(g)}$ are 8.0 and 2.0 respectively . The heat of dimerisation of NO_2 is

A. A) -14.0 kcal

B. B) $- 6.0 \text{ kcal}$

C. C) $+ 12.0 \text{ kcal}$

D. D) 10.0 kcal

Answer: A



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16. Heat of neutralization of HF is

A. $> 57.32J$

B. $< 57.32J$

C. 57.23J

D. None

Answer: A



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17. The pH of a solution having

$[H^+] = 10 \times 10^{-4}$ mol/litre will be

A. 4

B. 2

C. 3

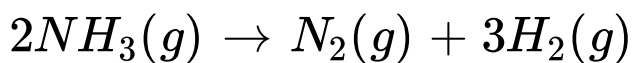
D. 1

Answer: C



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18. For the reaction :



A. 1.36

B. 0.34

C. 2.7

D. 0.675

Answer: D



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19. The most favourable condition of temperature and pressure for the oxidation of SO_2 into SO_3 are

A. High temperature and low pressure

B. Low temperature and high pressure

C. High temperature and high pressure

D. Low temperature and low pressure

Answer: B



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20. 1% (wt./vol) solution of urea is isotonic with 3% (wt./vol.) solution of a non electrolytic solute .

The mol. Wt. of solute is

A. 240

B. 120

C. 180

D. 60

Answer: C



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21. The substance whose solubility decreases with increase in temperature

A. Na_2CO_3

B. Na_2SO_4

C. $NaOH$

D. All

Answer: D



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22. 1 ml of hydrogen gas at NTP contains molecules equal to

A. 2.6×10^{21}

B. 2.6×10^{23}

C. 2.6×10^{20}

D. 2.6×10^{19}

Answer: D



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23. 13.5 g of Al get deposited when electricity is passed through solution of $AlCl_3$. The number of faradays used are

A. 2.00

B. 1.00

C. 1.50

D. 0.50

Answer: C



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24. When iron or zinc added to $CuSO_4$ solution copper is precipitated, it due to

A. Hydrolysis of $CuSO_4$

B. Reduction of SO_4^{2-}

C. Reduction of Zn

D. Reduction of Cu^{2+}

Answer: D



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25. The amount of $KMnO_4$ required to prepare 100 ml of 0.1 N solution in alkaline medium

A. 0.31 g

B. 0.52g

C. 3.16

D. 1.58

Answer: D



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26. An atom having ns^1 configuration may belong to

A. d-block

B. s-block

C. both

D. None of these

Answer: C



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27. Which particle is used to bombard ${}_{13}^{28}\text{Al}$ to

give ${}_{15}^{31}\text{P}$ and neutron ?

A. Deuteron

B. Neutron number

C. Proton

D. α -particle

Answer: D



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28. An oxide of N has vapour density 46. Total number of electron in 92 g are

A. 46 N

B. 92 N

C. 48 N

D. None

Answer: A



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29. A given gas cannot be liquefied if its temperature is

A. Forces of attraction are zero under ordinary conditions

B. Forces of attraction are low under ordinary conditions

C. Forces of attraction are either high or low under ordinary conditions

D. Forces of attraction are high under ordinary conditions.

Answer: A



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30. At STP , the order of root mean square velocity of molecules H_2 , N_2 , O_2 and HBr is

A. $N_2 > O_2 > H_2 > HBr$

B. $HBr > O_2 > N_2 > H_2$

C. $HBr > H_2 > O_2 > N_2$

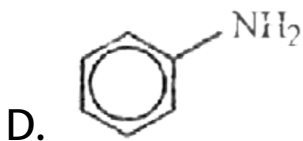
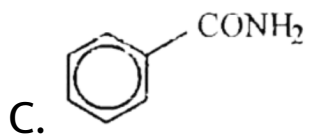
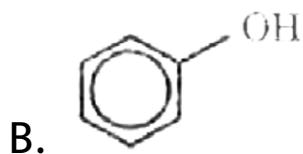
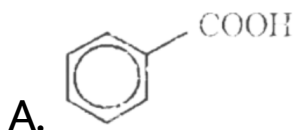
D. $H_2 > N_2 > O_2 > HBr$

Answer: D



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31. Which represents an amide ?



Answer: C



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32. An amine reacts with $C_6H_5SO_2Cl$ and the product is soluble in alkali amine is

A. 3°

B. 1°

C. 2°

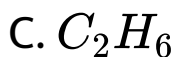
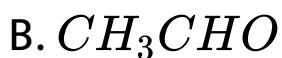
D. All

Answer: B



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33. Acetic acid vapours when passed over aluminium phosphate forms



D. ketenes

Answer: D



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34. Aldehydes and ketones form addition products with

A. Hydrogen cyanide

B. Hydrazine

C. Semicarbazide

D. Phenylhydrazine

Answer: A



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35. Formation of oxonium salt show that ethers are

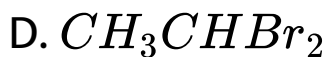
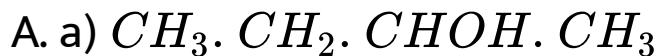
- A. A) Basic in nature
- B. B) Acidic in nature
- C. C) Acidic in nature
- D. D) None

Answer: A



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36. Iodoform test is given by



Answer: D



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37. A solution of sodium salt of fatty acid was electrolyzed during Kolbe's reaction . The solution left after electrolysis is

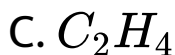
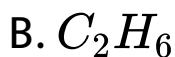
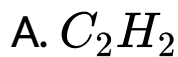
- A. Richer in H_2SO_4
- B. Richer in sodium salt
- C. Richer in NaOH
- D. All

Answer: C



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38. Hydrocarbon reacting with metal by displacing the H atom is



Answer: A



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39. Of the following compounds, which will have zero dipole moment ?

A. 1-butene

B. p-dinitro benzene

C. 2-methyl-1-propene

D. p-dimethoxy benzene

Answer: B



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40. NaCl ,NaBr , NaI mixture on adding conc.

H_2SO_4 gives gases respectively

A. HCl . HBr . HI

B. Cl_2 , Br_2 , I_2

C. HCl , Br_2 , I_2

D. None

Answer: C



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41. Copper reduces

A. Al

B. Na

C. Mg

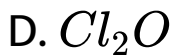
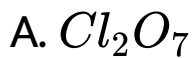
D. None

Answer: D



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42. Most stable oxide of chlorine is



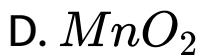
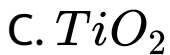
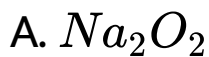
Answer: D



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43. Which oxide is of different type than other

?



Answer: A



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44. Each of the following is true about white and red phosphorous except that they

- A. Can be converted into one another
- B. Can be oxidised by heating in air
- C. Consist of same kind of atoms
- D. Are both soluble in CS_2

Answer: D



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45. Gas needed by plants for their growth

A. O_2

B. N_2

C. CO

D. CO_2

Answer: D



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46. Chemically borax is

A. Sodium tetra borate

B. Sodium metaborate

C. Sodium tetra borate decahydrate

D. Sodium orthoborate

Answer: C



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47. Which is not an oxide ore?

A. Bauxite

B. Siderite

C. Pyrolusite

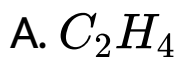
D. Cassiterite

Answer: B



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48. The geometry of water molecules is same as that of



B. Boron trifluoride



D. Chlorine oxide

Answer: D



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49. The pyrolusite ore contains

A. Cu

B. Al

C. Mn

D. Fe

Answer: C



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50. Which is most reactive chemically ?

A. Ba

B. Ca

C. Sr

D. Mg

Answer: A



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51. The compound that is most reactive towards electrophilic nitration is

- A. Toluene
- B. Benzoic acid
- C. Benzene
- D. Nitrobenzene

Answer: A



52. Amongst the following , the compound that can be most readily sulphonated is

- A. Benzene
- B. Toluene
- C. Nitrobenzene
- D. Chlorobenzene

Answer: B



53. Nitration of toluene takes place at

A. o-position

B. p-position

C. m-position

D. Both o- and p-position

Answer: D



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54. Which of the following deactivates benzene substitution ?

A. $-NHR$

B. $-COOR$

C. $-OH$

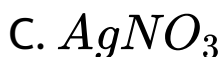
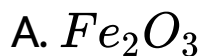
D. $-OR$

Answer: B



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55. Methyl group attached to benzene can be oxidised to carboxyl group by reacting with



Answer: B



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56. The most strained cycloalkane is

A. Cyclopropane

B. Cyclopentane

C. Cyclobutane

D. Cyclohexane

Answer: A



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57. Petroleum consists mainly of

A. Aliphatic hydrocarbons

B. Aliphatic alcohols

C. Aromatic hydrocarbons

D. None of these

Answer: A



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58. Which of the following fractions of petroleum has the lowest b.p.?

A. Kerosene oil

B. Gasoline

C. Diesel oil

D. Heavy oil

Answer: B



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59. Natural gas is composed primarily of

A. methane

B. n-octane

C. n-butane

D. Mixture of octanes

Answer: A



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60. Gasoline has compounds having composition

A. $C_3 - C_5$

B. $C_8 - C_{12}$

C. $C_6 - C_{10}$

D. $C_{10} - C_{13}$

Answer: C



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