

CHEMISTRY

BOOKS - NCERT FINGERTIPS CHEMISTRY (HINGLISH)

PRACTICE PAPER -1

Practice Paper 1

1. The unit	cell with	the given	structure	represents	
crystal syste	em.				

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A. cubic				
B. orthorhombic				
C. tetragonal				
D. trigonal				
Answer: A				
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2. In electrorefining the impure metal is made				
A. anode				
B. cathode				
C. anode or cathode				

D. electrolyte

Answer: A



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3. A compound (A) $C_5H_{10}Cl_2$ on hydrolysis gives $C_5H_{10}O$ which reacts with NH_2OH , forms iodoform but does not give Fehling test (A) is :

A.
$$H_3C-\overset{CI}{\overset{|}{C}}-CH_2CH_2CH_3$$
B. $CH_3CH_2-\overset{|}{\overset{|}{C}}-CH_2CH_3$
 $\overset{CI}{\overset{|}{C}}$
C. $\overset{CI}{\overset{|}{C}}HCH_2CH_2CH_2CH_3$

D.
$$CH_3CH_2CH-CHCH_3$$

Answer: A



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- 4. In hcp arrangement the coordination number is
 - A. 6
 - B. 12
 - C. 8
 - D. 10



Answer: B

- **5.** Which of the following statements is not ture?
 - A. Paramagnetic substances are weakly attracted by a magnetic field.
 - B. Ferromagnetic substances cannot be magnetised permanently .
 - C. The domains in antiferromagnetic substance are oppositely oriented with respect to each other.
 - D. Pairing of electrons cancels their magnetic moments in the diamagnetic substances.

Answer: B



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6. Which of halogen acids indicated below is incorrect?

A. HF gt HCI gt HBr gt HI (acidic strength)

B. HI gt HBr gt HCI gt HF (reducing strength)

C. HI gt HBr gt HCI gt HF (bond length)

D. HF gt HCI gt HBr gt HI (thermal stability)

Answer: A



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7. Aqueous solution of nickel sulphate on treating with pyridine and then adding a solution of sodium nitrite gives

dark blue crystals of

- A. $\left[Ni(py)_4\right]SO_4$
- $\operatorname{B.}\left[Ni(py)_2(NO_2)_2\right]$
- C. $ig[Ni(py)_4ig](NO_2)_2$
- D. $\left[Ni(py)_3(NO_2)\right]_2SO_4$

Answer: C



8. m-Chlorobenzaldehyde on reaction with conc. KOH at room temperature gives:

- A. Potassium m- chlorobenzoate and mhydroxybenzaldehyde
 - B. m-hydroxybenzaladehyde and m-chlorobenzyl alcohol
 - C. m -chlorobenzyl alcohol and m-hydroxybenzylalcohol
 - D. Potassium m-chlorobenzote and m-chlorobenzyl alcohol.

Answer: D



- **9.** Which of the following decreases on dilution of electrolyte solution ?
 - A. Equivalent conductance

- B. Molar conductance
- C. Specific conductance
- D. Conductance

Answer: C



- 10. Germanium is an example of
 - A. intrinsidc semiconductor
 - B. n-type semiconductor
 - C. p-type semiconductor
 - D. insulator.

Answer: A



11. Which of the following synthesis gives 3-methyl -1-hexanol?

A. 2- Bromohexance
$$\xrightarrow{\mathrm{Mg}} \xrightarrow{\mathrm{(i)}\ \mathrm{HCHO}} \xrightarrow{\mathrm{(ii)}H_3O^+}$$

B. (d) 1-Bromobutane
$$\frac{M_{3/3}}{\text{dry einer}} \stackrel{\text{(ii) } H_3O^+}{\stackrel{\text{(ii) } H_3O^+}{\text{(iii) } H_3O^+}}$$

C. 3- Bromopentane
$$\xrightarrow{\text{Mg}} \xrightarrow{(i) CH_3CHO} \xrightarrow{(ii) H_3O^+}$$

D. 1- Bromobutane
$$\xrightarrow{\mathrm{Mg}} \xrightarrow{(i)\,CH_3COCH_3} \xrightarrow{(ii)\,H_3O^+}$$

Answer: B



12. Non-reducing sugar is

A. maltose

B. sucrose

C. lactose

D. none of these.

Answer: B



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13. The electrode potential of oxidation half cell

A. is independent of the concentration of ions in the cell

B. decrease with deccreased concentration of ions is the cell

C. decreases with increased concentration of ions in the cell

D. none of these.

Answer: B



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14. In a cubic closed packed structure of mixed oxides the lattice is made up of oxide ions, one eighth of tetrahedral

voids are occupied by divalent ions $\left(A^{2\,+}
ight)$ while one half of the octahedral voids occupied trivalent ions $\left(B^{3+}\right)$. What is the formula of the oxide?

- A. A_2BO_4
- B. AB_2O_3

 $\mathsf{C}.\,A_2BO_3$

D. AB_2O_4

Answer: D



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15. Which of the following is not an actinide?

A. Uranium

- B. Curium
- C. Californium
- D. Erbium

Answer: D



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16. Copper is extracted from copper pyrites ore by heating in a blast furnace. The method is based on the principal that

A. copper has more affinity for oxygen than sulphur at high temperature.

B. iron has more affinity for oxygen than copper at high temperature.

C. sulphur has less affinity for oxygen at high temperature

D. copper has less affinity for oxygen than sulphur at high temperature.

Answer: B



17. Alcohols can be converted to various types of gasoline (petrol) by shape-selective catalysts

A. Maltase

- B. ZSM-5
- C. Lindlar's catalyst
- D. Ziegler Natta catalyst

Answer: B



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18. In a set of reactions, acetic acid yielded a product D.

$$CH_{3}COOH \xrightarrow{SOCl_{2}} [A] \xrightarrow{Benzene} [B]$$

$$\downarrow HCN$$

$$[D] \xleftarrow{H_{2}O/H^{+}} [C]$$

The structure of D would be:

A.
$$OH$$
 $C-COOH$
 CH_3

$$O. \qquad \bigcirc \begin{matrix} CN \\ C-CH_3 \\ OH \end{matrix}$$

Answer: A



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19. The element with atomic number 33 belongs to

A. group 13

- B. group 14
- C. group 15
- D. group 16

Answer: C



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20. For H_3PO_3 and H_3PO_4 the correct choice is

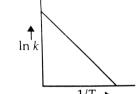
- A. H_3PO_3 is dibasic and reducing
- B. H_3PO_3 is dibasic and non-reducing
- C. H_3PO_4 is tribasic and reducing
- D. H_3PO_3 is tribasic and non-reducing.

Answer: A

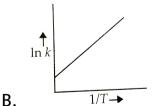


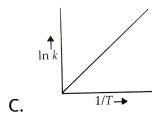
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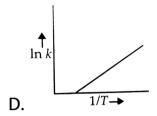
21. According to Arrhenius equation rate constant k is equal to $Ae^{-E_a/RT}$. Which of the following option. Represents the graph of ln k us $\frac{1}{T}$?



A.







Answer: A



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22. Among the electrolytes $Na_2SO_4,\,CaCI_2,\,AI_2(SO_4)_3$ and NH_4CI the most effective oagulating agent for Sb_2S_3 sol is

A. Na_2SO_4

B.
$$CaCI_2$$

C.
$$AI_2(SO_4)_3$$

D.
$$NH_4CI$$

Answer: C



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23. Which is correct about saccharin?

B. It is 600 times sweeter than sugar.

C. It is used as sweetening agent.

D. All of these

Answer: A:C



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24. In which mode of expression the concentration of solution remains independent of temperature ??

- A. Normality
- B. Formality
- C. Mole fraction
- D. Molarity

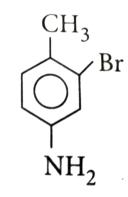
Answer: C

$$\begin{array}{c}
CH_{3} \\
& \xrightarrow{(CH_{3}CO)_{2}O} A \xrightarrow{Br_{2}/CH_{3}COOH} B \\
NH_{2} \\
\end{array}$$

What is X?

What is X?

A.



$$\operatorname{CH}_3$$
 Br
 BH_2

$$CH_3$$
 $COCH_3$
 NH_2

D. 🖳

Answer: B



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26. The order of reactivities of the following alkyl halides for a S_{N^2} reaction is :

A. RF gt RCI gt RBr gt RI B. RF gt RBr gt RCI gt RI C. RCI gt RBr gt RF gt RI D. RI gt RBr gt RCI gt RF

Answer: D



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- 27. Gabriel phthalimide reaction is used for the preparation of ____amines
 - A. primary aromatic
 - B. secondary
 - C. primary aliphatic

D. tertiary

Answer: C



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28.
$$CH_3CHO + HCHO \xrightarrow{ ext{dil. NaOH}} A \xrightarrow{HCN} B$$

the structure of compound B is

A.
$$CH = CH - CH - COOH$$

B.
$$CH_2 = CH - CH - OH$$

C.
$$CH_3CH_2-CH-COOH$$

D.
$$CH_3 - CH - COOH$$

Answer: A



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29. Drugs which bind strongly to the active site of an enzyme and do not depend upon concentration of natural substrate are called as

- A. competitive inhibitors
- B. non-competitive inhibitors
- C. β -blockers.
- D. α -blockers.

Answer: B



30. Tincture of iodine is

- A. aqueous solution of I_2
- B. alcoholic solution of I_2
- C. solution of I_2 in aqueous KI
- D. aqueous solution of KI

Answer: B



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31. Which of the following cannot show linkage isomerism?

A. NO_2^-

B. SCN^- C. CN^- D. NH_3 Answer: D

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32. The oxidation of central atom in the complex

 $ig[{\it Co}(NH_3)_4 {\it CINO}_2 ig]$ is

A. + 2

B.+3

C. + 1

D. zero



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33. Which of the following are intermediates in the reaction of excess of CH_3MgBr with $C_6H_5COOC_2H_5$ to make 2 - phenyl -2- propanol ?

A.
$$C_6H_5-rac{ ext{OMgBr}}{ ext{}_{CH_3}}$$

B.
$$C_6H_5-\stackrel{||}{-}CH_3$$

A. A and B

B. A,B and C

- C. A and C
- D. B and C

Answer: B



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34. Acetic acid is obtained when

- A. Methyl alcohol is oxidised with potassium permanganate
- B. Calcium acetate is distilled in the presence of calcium formate

C. acetaldehyde is oxidised with potassium dichromate

and sulphuric acid

D. glycerol is heated with sulphuric acid.

Answer: C



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35. In α -helix , structure, polypepetide chains are folded in a

A. right hand side

B. left hand side

C. both way

D. none of these.

Answer: A



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36. The electrode potential is the tendency of metal

- A. to gain electrons
- B. to lose electrons
- C. to either lose or gain electrons
- D. none of these.

Answer: C



37. Transition elements exhibit higher enthalpiese of atomization because

A. of large number of unpaired electrons

B. of having stronger interatomic interaction

C. of strong bonding between atoms

D. All of these

Answer: D



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38. Which of the following is a monomer of natural rubber

A. Chloroprene

- B. Caproplactam
- C. Urea
- D. none of these.

Answer: D



- **39.** The compound which reacts fastest with Lucas reagent at room temperature is
 - A. butan-1-ol
 - B. butan -2-ol
 - C. 2-methypropan-1-ol
 - D. 2-methylpropan -2-ol

Answer: D



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40. Bakelite is obtained from phenol by reaction with

A. HCHO

B.
$$(CH_2OH)_2$$

 $C.CH_3CHO$

D. CH_3COCH_3

Answer: A



41. Which one of the following on oxidation gives a ketone?

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. All of these

Answer: B



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42. An ether is more volatile than alcohol having the same molecular formula. This is due to

A. intermolecular hydrogen bonding in ethers

- B. dipolar character of ethers
- C. alcohols having resonance structures
- D. intermolecular hydrogen bonding in alcohols.

Answer: D



- The 43. reaction $RCH_2CH_2COOH \xrightarrow{RedP + Br_2} R - CH_2 - CH(Br) - COOH$
 - A. Reimer-Tiemann reaction
 - B. Hell-Volhard Zelinsky reaction
 - C. Cannizzaro reaction
 - D. Sandmeyer reaction.

Answer: B



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- 44. Which of the following is useed for inducing sleep?
 - A. Paracetamol
 - B. Chloroquine
 - C. Bithional
 - D. Barbituric acid deribvatives

Answer: D



45. Identify A in the following sequence of reactions

$$A \xrightarrow[1 \text{ mol}]{NH_3} B \xrightarrow[A \text{ lc KOH}]{CHCI_3} C \xrightarrow{\text{Reduction}} (CH_3)_2 CHNHCH_3$$

- A. Ethyl halide
- B. Iso-propylamine
- C. n-propyl halide
- D. Iso-propyl halide

Answer: D



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46. IN the reaction, $2NO+CI_2 o 2NOCI$ it has been found that doubling the concentration of both the reactants increases the rate by a factor of eight but

doubling the chlorine concentration alone only doubles the rate. Which of the following statements is incorrect?

A. The reaction is first order in CI_2

B. The reaction is second order in NO.

C. The overall order of reaction is 2.

D. The overall order of reaction is 3.

Answer: D



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47. Which one of the following ions is coloured?

A. Sc^{3+}

- B. Ti^{4+}
- C. Zn^{2+}
- D. V^{2+}

Answer: D



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48. which of the following statements about lanthanides is incorrect ?

- A. All lanthaide are highly dense metals.
- B. More characteristic oxidation state of lanthanides is
 - +3.

C. Lanthanides are separated from one another by ion exchange method.

D. Ionic radii of trivalent lanthanides steadily increase with increase in atomic number.

Answer: D



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49. Match the column I with column II and mark the appropriate choice.

Column I		Column II	
(A)	Aniline	(i)	Can be made by Gabriel phthalimide reaction
(B)	N-Methylaniline	(ii)	Undergoes electrophilic substitution reaction with HNO ₂
(C)	N, N- Dimethylaniline	(iii)	Forms yellow oily product with HNO ₂
(D)	Benzylamine	(iv)	Gives azo dye test

A.
$$A
ightarrow iv, B
ightarrow iii, C
ightarrow ii, D
ightarrow i$$

B.
$$A
ightarrow ii, B
ightarrow iv, C
ightarrow I, D
ightarrow iii$$

C.
$$A
ightarrow iii, B
ightarrow I, C
ightarrow iv, D
ightarrow ii$$

D.
$$A o I, B o ii, C o iii, D o iv$$

Answer: A



50. Which is a characteristic of a catalyst?

A. It changes the equilibrium point

B. It initiates the reaction

C. It alters the rate of reaction

D. It increases the average kinetic energy of the molecule.

Answer: C



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