

JNIVERSAL ACADEMY

Icon of Success and Excellence

MOCK CET - 2015

DATE	SUBJECT	TIME	
20.04.2015	CHEMISTRY	3.50 PM TO 5.00 PM	
MAXIMUM MARKS	TOTAL DURATION	MAXIMUM TIME FOR ANSWERING	
60	80 MINUTES	70 MINUTES	
MENTION YOUR	QUESTION BOOKLET DETAILS		
CET NUMBER	VERSION CODE	SERIAL NUMBER	
	D-2		

DOs:

- 1. Check whether the CET No. has been entered and shaded in the respective circles on the OMR answer sheet.
- 2. This Question Booklet is issued to you by the Invigilator after **1st Bell** i.e, after **3.45 p.m**
- 3. The Serial Number of this question booklet should be entered on the OMR answer sheet.
- 4. The Version Code of this question booklet should be entered on the OMR answer sheet and the respective circles should be shaded completely.
- 5. Compulsory sign at the bottom portion of the OMR answer sheet in the space provided.

DONTs:

- 1. The timing and marks printed on the OMR answer sheet should not be damaged/mutilated/ spoiled.
- 2. The 2nd Bell rings at 3.50 p.m. till then,
 - Do not remove the seal/staple present on the right hand side of this question booklet.
 - Do not look inside this question booklet.
 - Do not start answering on the OMR answer sheet.

IMPORTANT INSTRUCTIONS TO CANDIDATES

- 1. This question booklet contains 60 questions and each question will have one statement and four distraction (four different options / choices).
- 2. After the **2nd Bell** is rung at **3.50 p.m**. Remove the seal/staple present on the right hand side of this question booklet and start answering on the OMR answer sheet.
- 3. During the subsequent 70 minutes:
 - Read each question carefully.
 - Choose the correct answer from out of the four available distracters (options /choices) given under each question/statement.
 - Completely darken / shade the relevant circle with a BLUE OR BLACK INK BALLPOINT PEN against the question number on the answer sheet.

CORRECT METHOD OF SHADING THE CIRCLE ON THE ANSWER SHEET IS AS SHOWN BELOW:



- 4. Please note that even a minute unintended ink dot on the answer sheet will also be recognized and recorded by the scanner. Therefore, avoid multiple markings of any kind on the OMR sheet.
- 5. Use the space provided on each page of the question booklet for Rough work. Do not use the OMR answer sheet for the same.
- 6. After the **last bell** is rung at **5.00 pm** stop writing on the OMR answer sheet and affix your LEFT HAND THUMB IMPRESSION on the OMR answer sheet as per the instructions.
- 7. Hand over the OMR answer sheet to the room invigilator as it is.
- 8. After separating and retaining the top sheet, (UA copy) the invigilator will return the bottom sheet replica (candidate's copy) to you to carry home for self evaluation.
- 9. Preserve the replica of the OMR answer sheet for a minimum period of ONE week. For results, log on to the website www.uaes.in 5 days after the examination.

CHEMISTRY CET - 2

one of A+ ions from the corner in replaced by a monovalent ion C+, the simplest formula of the resulting compound is a) A ₂ BC ₇ b) A ₇ BC ₆ c) A ₃ BC ₄ d) A ₄ BC ₅ 2. Out of molarity (M), molality (m), formality (F) and mole fraction (x) those independent of temperature are a) M, m b) F, x c) m, x d) M, x 3. How long will it take for a current of 3 amperes to decompose 36g of water? (Eq. wt of hydrogen 1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25 ^o C. If the reduction potential is Z > Y > X, then a) Y will oxidise to A X & Z d) Y will oxidise Z and not X c) Y will oxidise to X & Z d) Y will oxidise to X & Z c) Y will oxidise to X & Z d) Y will oracides the work at the awf or a reaction between the substances A and B is given by rate = K[A] ^m [B] ⁿ . Cn doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $(U + SO_3)$ b) $(U + SO_2)$ c) $Cu_2SO_3 $ d) $4u_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) $0 $ b) $2 $ c) $3 $ d) 4 9. Which has largest radius? a) $CO^{2+} $ b) Mn^{2+} c) Fe^{2+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) $2^{(2-m)}$ d) $\frac{1}{2^{(2-m)}}$ b) $\frac{1}{2^{(2-m)}}$ d) $\frac{1}{2^{(2-m)}}$ a) 2.4 -dibromotoluene b) $2.4.6$ -tribromophenol c) 3 -bromotoluene c) $-p-tormotoluene c) -p-tormotoluene c) -p-tormotoluene c) -p-tormotoluene c) -p-tormotoluene c) -p-tormotoluene c) 2-thy(3-h)droxypentanal d) 2.4-dibromophenol c) 3-bromotoluene c) 2-thy(3-h)droxypentanal d) 2.4-dibromophenol c) 3-bromotoluene $	1.	A compound consisting of monovalent ions, A^+ , B^- crystallises in the body-centred cubic lattice. If				
resulting compound is a) AgBC ₇ b) A ₇ BC ₈ c) A ₃ BC ₄ d) A ₄ BC ₅ 2. Out of molarity (M), molality (m), formality (F) and mole fraction (x) those independent of temperature are a) M, m b) F, x c) m, x d) M, x 3. How long will it take for a current of 3 amperes to decompose 36g of water? (Eq. wt of hydrogen 1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y - and 1M Z at 25°C. If the reduction potential is Z > Y > X, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise to th X & Z b) Y will oxidise Z and not X c) Y will oxidise to the xection between the substances A and B is given by rate = K[A]" [B]". The rate law for a reaction between the substances A and B is given by rate = K[A]" [B]". On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $(u + SD_3)$ b) $(u + SD_2)$ c) Cu_2SO_3 d) $Lu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) $C_1 = C^{n} + CO-P bonds in cyclic metaphosphoric acid is a) 0 b) M^{3^+} c) F^{3^+} d) Cr^{3^+}10. Assign the hybridization, shape and magnetic moment of K_2[Cu(CN)_4]a) Sp^3, tetrahedral, 1.73BM b) dsp^2, square planar, 2.44BM11. The compound C_2H_2GA A \frac{Bc}{A} A \frac{Bc}{A} B = \frac{C}{A} A^{-D} Ba) 2.4-dibromophenolc) -bromotoluene b) A x^{3^-} A = \frac{C}{A} A^{-D} Ba) 2.4-dibromophenolc) 2.4-dibromophenolc) -2-ethyl-3-hydroxypentanal10. Solido a diverse of 0 - m - p -boluidines isa) 2 $		one of A+ ions from the corner in replaced by a monovalent ion C+, the simplest formula of the				
a) $A_{B}C_{7}$ b) $A_{B}C_{6}$ c) $A_{A}BC_{6}$ d) $A_{A}BC_{5}$ 2. Out of molarity (M), molality (m), formality (F) and mole fraction (x) those independent of temperature are a) M, m b) F, x c) m, x d) M, x 3. How long will it take for a current of 3 amperes to decompose 36g of water? (Eq. wt of hydrogen 1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is tubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is $Z > Y > X$, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise to X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A]^*[B]^*. On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the eartier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n - m)}$ d) $\frac{1}{2^{(n - m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of CU ₂ and CU ₂ S will give a) $O b D^2 c C J^3 d) Cu_2 O + Cu_S$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) $O b D^2 c C J^3 d) 4$ 9. Which has largest radius? a) $O^{2n+} b) Mn^{3+} b) Fe^{3+} d) Cr^{-3+}$ 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) g^{2n} , letrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_{H_3} \frac{3^{(n)}}{\Delta} A \frac{3^{(n)}}{\Delta} B^{(n)} Fe^{2n/Hel} C$ the compound C is a) $O + Dromotoluene b) n-bromotoluene c) p-bromotoluene b) D + A_1 \frac{3^{(n)}}{\Delta} A \frac{3^{(n)}}{\Delta} A^{(n)} Fe^{2n/Hel} C the compound C isa) 2 + ethyl-3 + hydroxypentanal d) 2 + ethyl-3 + hydroxypentanal d) 2 + ethyl-3 + hydroxypentanal d) 2 - ethyl-3 + hydroxypentanal d) 2 + ethyl-3 + hydroxypentanal d) 2 - et$		resulting compound is				
 Out of molarity (M), molality (m), formality (F) and mole fraction (x) those independent of temperature are a) M, m b) F, x c) m, x c) m, x d) M, x d) M, m b) F, x c) m, x c) m, x d) M, x d) M, x d) M, m b) F, x c) m, x c) m, x d) A shours d) Y will oxidise Z and not X c) Y will oxidise both X & Z d) Y will reduce both X & Z d) Y will reduce both X & Z d) Y will reduce both X & Z d) A shours d) A		a) A_8BC_7 b) A_7BC_8	c) A ₃ BC ₄	d) A ₆ BC ₅		
a) M, m b) F, x c) m, x d) M, x 3. How long will it take for a current of 3 amperes to decompose 36g of water? (Eq. wt of hydrogen 1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is Z > Y > X, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise both X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{21} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_1]$ a) sp^3 , tetrahedral, 2.44BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM b) dsp ² , square planar, 2.44BM 11. The compound $C_1H_3^{-Cu_2A}A \xrightarrow{m_2/Fe}B \xrightarrow{m_2/Fe}C$ the compound C is a) o-bromotoluene d) 3-bromo-2.4.6-trichlorotolnene 12. Consider the following set of reactions, $\overrightarrow{A} A \xrightarrow{m_2} B$ a) 2.4-ditromophenol c) 3-bromobluene d) 3-bromo-2.4.6-trichlorotolnene 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) $P < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 14. Increasing b' values of O - , m - , p-toluidines is a) $P < m < o$ b) $0 < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the i	2.	Out of molarity (M), molality (m), formality (temperature are	F) and mole fraction (x)	those independent of		
3. How long will it take for a current of 3 amperes to decompose 36g of water? (Eq. wt of hydrogen 1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is $2 > Y > X$, then a) Y will oxidise X and not Z b) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heading mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) M^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^5 , tetrahedral, 1.73BM b) dsp ⁵ , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ⁵ , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ⁵ , square planar, 2.44BM 11. The compound $C_{H_3} \frac{2Cu_4}{2} A \xrightarrow{B_{D} \to B}$ a) 2.4 -dibromophenol cic acid d) 3.5 -dibromophenol c) a-bromotoluene d) 3 -bromotoluene c) p-bromotoluene d) 3 -bromotoluene c) 2 -bromotoluene d) 3.5 -dibromophenol c) 3 -bromotoluene d) 3.67 (the callyst d) $M < o < p$ 15. Find the isoelectric point of the given amino acid $CH = CH = COO - P^{Pa} = 2.34 + P^{Pa} = 4.32 + P$		a) M, m b) F, x	c) m. <i>x</i>	d) M. <i>x</i>		
1 & that of oxygen is 8) a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is Z > Y >X, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise both X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of PO-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ⁵ , square planar, 2.44BM 11. The compound $C_1H_3^{3CL}A A \xrightarrow{Br_2 \to B}$ a) 2.4 -diformophenol c) p-bromotoluene d) 3 -bromo-2.4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\overbrace{Conc H_2SO_4}{A} A \xrightarrow{Br_2 \to B}$ a) 2.4 -diformophenol c) 3 -bromobenzenesulphonic acid d) 3.5 -diformophenol c) 3 -bromobenzenesulphonic acid d) 3.5 -diformophenol c) 3 -bromobenzenesulphonic acid d) 3.5 -diformophenol 13. The cross Aldol product formed when propanol acits as the electrophile and butanal as nucleophile is a) $3 - hydroxy-2$ -methylphentanal b) 3 -hydroxy-2-methylhexanal () 2 -ethyl-3-hydroxypentanal b) 3 -hydroxy-2-methylhexanal 14. Increasing p^{N} alues of $O - (m - p)$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid CH = CH = COO = P^{m} = 2.34 $+NH_5$ $P^{m} =$	3.	How long will it take for a current of 3 amperes	to decompose 36g of wat	er? (Eq. wt of hydrogen		
a) 36 hours b) 18 hours c) 9 hours d) 4.5 hours 4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is Z > Y > X, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise both X & Z d) Y will ordice Z and not X c) Y will oxidise both X & Z d) Y will ordice Z and not X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^5 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_a \frac{3Cr_2A}{2}A \xrightarrow{Br_2Fe} B \frac{2n/Rcl}{2}C$ the compound C is a) 0 -bromotoluene d) 3-bromo-2.4.6-trichlorotolnene c) p-bromotoluene d) $3-bromotoluene c) p-bromotoluene d) 3-bromotoluene c) g-bromotoluene d) 3-bromotoluene d) 3-bromotoluene d) 3-bromotoluene d) 3-bromotoluene d) a - m_2bluidines is a) 2.4-dibromophenol b) c m < p d) m < o < p13. The crose Aldol product formed when propanol acts as the electrophile and butanal as nucleophile isa) 2.4-dibromophenol cid (-1, -CO) - P^{e^2} = 2.34 + \frac{1}{1+N+1} P^{e^2} = 4.32 + \frac{1}{2}a) 3.3 b) 6.66 c) 6.01 d) 3.6715. Find the isoelectric point of the given amino acidCH = CH - COO - P^{e^2} = 2.34 + \frac{1}{1+N$	-	1 & that of oxvgen is 8)	,			
4. A gas X at 1 atm is bubbled through a solution containing a mixture of 1M Y- and 1M Z- at 25°C. If the reduction potential is Z > Y >X, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise both X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) Cu + SO ₃ b) Cu + SO ₂ c) Cu ₂ SO ₃ d) Cu ₂ O + CuS 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO ³⁺ b) Mn ³⁺ c) Fe ³⁺ d) Cr ³⁺ 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 1.73BM c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound C-H ₄ ^{3.42(A} /A $\frac{Br_2/F_6}{A} B \frac{Zn/Hcl}{C}$ the compound C is a) o-bromotoluene d) 3-bromo-2.4,6-trichiorotolnene 12. Consider the following set of reactions. Phenol $A A \xrightarrow{-Mr_4} B$ a) 2.4-dibromophenol b) 2.4,6-tribromophenol c) p-bromotoluene d) 3.5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3.4-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxy-2-methylhexanal c)		a) 36 hours b) 18 hours	c) 9 hours	d) 4.5 hours		
If the reduction potential is $Z > Y > X$, then a) Y will oxidise X and not Z b) Y will oxidise Z and not X c) Y will oxidise both X & Z c) Y will y	4.	A gas X at 1 atm is bubbled through a solution	containing a mixture of 1	M Y- and 1M Z- at 25 ^o C.		
a) Y will oxidise X and not Z b) Y will oxidise Z and not X. c) Y will oxidise both X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_4 \xrightarrow{3Ce_1/A} A \xrightarrow{Br_2/Pe} B \xrightarrow{2n/Hel} C$ the compound C is a) o-bromotoluene d) 3-bromo-2.4,6-trichototolnene 12. Consider the following set of reactions, Phenol $\overbrace{A} A \xrightarrow{Br_2} B$ a) 2.4-dibromophenol b) 2.4,6-tribromophenol c) 3-bromobeneuesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3.hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ⁵ values of O - , m - , p-toluidines is a) 3.hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) $C - CP - CP - P^{Pe} = 2.34 + NH_3$ $P^{Pe} = 4.32 + NH_3$ $P^{$		If the reduction potential is $Z > Y > X$, then	5			
c) Y will oxidise both X & Z d) Y will reduce both X & Z 5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(1-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ⁵ , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp ⁵ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound C ₂ H ₈ $\frac{S(E_2A}{A} = \frac{Br_2/Fe}{A} = \frac{Zn/MCC}{A}$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\frac{conc.H_2SO_4}{A} = \frac{Br_3}{A} = B$ a) 2,4-dibromophenol b) 2,2-chyl-3-hydroxyhexanal 14. Increasing p ⁶ values of O -, m -, p-toluidines is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylphexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ⁶ values of O -, m -, p-toluidines is a) $3 - M < 0 < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid CH - CH - COO - P ^{6/e} = 2.34 a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin		a) Y will oxidise X and not Z	b) Y will oxidise Z and no	ot X		
5. The rate law for a reaction between the substances A and B is given by rate = K[A] ⁿ [B] ⁿ . On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in scap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3*} b) Mn^{3+} c) Fe^{3*} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_1H_3^{3C_{12}/A} A \frac{Br_2/Fe}{B} B = \frac{Zn/Hcl}{A} C$ the compound C is a) o-bromotoluene d) 3-bromo-2.4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol A $A = \frac{Bn}{A} B$ a) 2.4-dibromophenol b) 2.4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3.5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3.2-dibromophenol c) 3-bromobenzenesulphonic acid d) 2-ethyl-3-hydroxyhexanal 14. Increasing b [*] values of 0 -, m -, p-toluidines is a) $p < m < 0$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Na} = 2.34$ $+NN_3$ b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) 2.3. b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) 2.3. b) 6.66 c) 6.01 d) Merrified resin		c) Y will oxidise both X & Z	d) Y will reduce both X &	Z		
On doubling the concentration of A and having the concentration of B, the ratio of the new rate to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Sul_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_rH_8 \xrightarrow{3CL_2/A} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $A \xrightarrow{A} A \xrightarrow{Br_3} B$ a) 2,4-dibromophenol b) 2,2-ehyl-3-hydroxyhexanal c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 2-ethyl-3-hydroxyperturnal b) 3-hydroxy-2-methylphentanal c) 2-ethyl-3-hydroxyperturnal b) 3-hydroxyhexanal 14. Increasing p ^k values of O - m - p-toluidines is a) $3 - Nydroxy-2-methylphentanal c) 12 - ethyl-3-hydroxyhexanal 14. Increasing pk sulues of O - m - p-toluidines is a) 3 - Nydroxy-2-methylphentanal c) 12 - ethyl-3-hydroxyhexanal c) 2 - ethyl-3-hydroxyhexanal c) 1 - CH - COO - P^{Ne} = 2.34(M-1) P^{Ne} = 4.32a) 3.3 b) 6.66 c) 6.01 d) 3.6716. The catalyst used for olefin polymerization isa) 2[geler-Natta catalystc) Raney nickel catalystd) Merrified resin$	5.	The rate law for a reaction between the substar	nces A and B is given by r	ate = $K[A]^n [B]^n$.		
to the earlier rate of the reaction will be as a) $M + n$ b) $(n - m)$ c) $2^{(n-m)}$ d) $\frac{1}{2^{(n-m)}}$ 6. The dispersed phase & dispersion medium in soap lather are respectively a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_8^{3CUA}A \xrightarrow{Br_2/Fe}B^{2n/Hcl}C$ the compound C is a) o-bromotoluene d) 3-bromo-2.4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\overbrace{\Delta}^{Court}A \xrightarrow{A} \xrightarrow{Br_3}B$ a) 2.4-dibromophenol b) 2.4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3.5-dibromophenol c) 3-bromobenzenesulphonic acid d) 2.ethyl-3-hydroxy-2-methylphexanal c) 2-ethyl-3-hydroxypentanal b) 3-hydroxy-2-methylphexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ⁴ values of $O - , m - , p$ -toluidines is a) $p < m < 0$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - p^{P^{30} = 2.34} + \frac{P^{30}}{+NH_5} = 2.34$ $+NH_5$ b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) 2.5gler-Natta catalyst c) Raney nickel catalyst d) Merrified resin		On doubling the concentration of A and having	the concentration of B, t	he ratio of the new rate		
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a) Gas & liquid b) Liquid & gas c) Solid & gas d) Solid & liquid 7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ³ , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp ³ , tetrahedral, 2.44BM 11. The compound $C_7H_8 \xrightarrow{3CL_2/A} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene d) 3-bromotoluene d) 3-b	6.	The dispersed phase & dispersion medium in s	oap lather are respectively	$\sqrt{2^{(n-m)}}$		
7. Heating mixture of Cu ₂ O and Cu ₂ S will give a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ³ , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{3Ce_1/A} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{conc.H_2SO_4} A \xrightarrow{Br_3} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,6-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ⁶ values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Fe} = 2.34$ $+NH_3$ $P^{Fb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin		a) Gas & liquid b) Liquid & gas	c) Solid & gas	, d) Solid & liquid		
a) $Cu + SO_3$ b) $Cu + SO_2$ c) Cu_2SO_3 d) $Cu_2O + CuS$ 8. The number of P-O-P bonds in cyclic metaphosphoric acid is a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp^2, square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp^2, square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{3Cl_8/A} A \xrightarrow{Br_2/Fe} B \xrightarrow{Zn/Hcl} C$ the compound C is a) o-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{conc.H_2SO_4} A \xrightarrow{Br_3} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 2-ethyl-3-hydroxyhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ⁶ values of O -, m -, p-toluidines is a) $p < m < o$ b) $p < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - p^{Pa} = 2.34$ $+NH_3$ $p^{Pb} = 4.32$ a) 3.3 b) 6.66 c) 0.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin	7.	Heating mixture of Cu ₂ O and Cu ₂ S will give	, 5	, ,		
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a) 0 b) 2 c) 3 d) 4 9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{Br_2/Fe} B \xrightarrow{Zn/Hcl} C$ the compound C is a) o-bromotoluene d) 3-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromotoluene d) 3-bromotoluene c) p-bromotoluene d) 3-bromotoluene c) p-tomotoluene d) 3-bromotol	8.	The number of P-O-P bonds in cvclic metaphos	sphoric acid is	, 2		
9. Which has largest radius? a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp^3 , tetrahedral, 1.73BM b) dsp^2 , square planar, 1.73BM c) sp^3 , tetrahedral, 2.44BM d) dsp^2 , square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{SCa_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{Zn/Hcl} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{Conc.H_2SO_4} A \xrightarrow{Br_2} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $P^{Ka} = 2.34$ $+NH_3$ P^{Ka		a) 0 b) 2	c) 3	d) 4		
a) CO^{3+} b) Mn^{3+} c) Fe^{3+} d) Cr^{3+} 10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ³ , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_3 \xrightarrow{3CL_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hel} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{conc.H_2SO_4} A \xrightarrow{Br_3} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $i p^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	9.	Which has largest radius?	,	,		
10. Assign the hybridization, shape and magnetic moment of $K_2[Cu(CN)_4]$ a) sp ³ , tetrahedral, 1.73BM b) dsp ² , square planar, 1.73BM c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{3Ct_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hel} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{Conc.H_2SO_4} A \xrightarrow{Br_2} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Fa} = 2.34$ $+NH_3$ $\stackrel{Pris}{=} 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		a) CO^{3+} b) Mn^{3+}	c) <i>Fe</i> ³⁺	d) <i>Cr</i> ³⁺		
a) sp ³ , tetrahedral, 1.73BM c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 1.73BM d) dsp ² , square planar, 2.44BM 11. The compound $C_7H_8 \xrightarrow{3CL_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{Conc.H_2SO_4} A \xrightarrow{Br_2} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 2-ethyl-3-hydroxy-2-methylphentanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - COO - P^{P^{in} = 2.34} + \frac{1}{P^{100}} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin	10.	Assign the hybridization, shape and magnetic r	noment of $K_2[Cu(CN)_A]$,		
c) sp ³ , tetrahedral, 2.44BM d) dsp ² , square planar, 2.44BM 11. The compound CrH ₈ $\xrightarrow{3Cl_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, $\overrightarrow{Phenol} \xrightarrow{conc.H_2SO_4} A \xrightarrow{Br_2} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol d) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - p^{Ka} = 2.34$ $+NH_3$ $p^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin		a) sp ³ , tetrahedral, 1.73BM	b) dsp ² , square planar, 1	.73BM		
11. The compound $C_rH_8 \xrightarrow{3CL_2/\Delta} A \xrightarrow{Br_2/Fe} B \xrightarrow{2n/Hcl} C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, $\begin{array}{c} \hline conc.H_2SO_4 \\ \hline \Delta \\ A \\ \hline \Delta \\ A \\ \hline Br_2 \\ B \\ a) 2,4-dibromophenol \\ c) 3-bromobenzenesulphonic acid \\ d) 3,5-dibromophenol \\ c) 3-hydroxy-2-methylphentanal \\ d) 2-ethyl-3-hydroxy-2-methylphentanal \\ c) 2-ethyl-3-hydroxypentanal \\ d) 2-ethyl-3-hydroxypentanal \\ d) 2-ethyl-3-hydroxyhexanal \\ d) p < m < o \\ b) o < m < p \\ c) p < o < m \\ d) m < o < p \\ d) m < o < p \\ find the isoelectric point of the given amino acid \\ CH - CH - COO - P^{Ka} = 2.34 \\ + NH_3 \\ P^{Kb} = 4.32 \\ a) 3.3 \\ b) 6.66 \\ c) 6.01 \\ d) 3.67 \\ find the catalyst used for olefin polymerization is \\ a) Ziegler-Natta catalyst \\ c) Raney nickel catalyst \\ d) Merrified resin \\ \end{array}$		c) sp ³ , tetrahedral, 2.44BM	d) dsp ² , square planar, 2	.44BM		
11. The compound $C_{7}T_{8} \longrightarrow A \longrightarrow B \longrightarrow C$ the compound C is a) o-bromotoluene b) m-bromotoluene c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $A \xrightarrow{Br_{2} \otimes B}$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_{3}$ $p^{Ko} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	4.4	The compound C II $\frac{3Cl_2}{\Delta}$ Br_2/Fe Zn/Hcl C II	he compound C is			
c) p-bromotoluene d) 3-bromo-2,4,6-trichlorotolnene 12. Consider the following set of reactions, Phenol $\xrightarrow{conc.H_2SO_4}$ A $\xrightarrow{Br_2}$ B a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $p^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	11.	The compound $C_7 \square_8 \longrightarrow A \longrightarrow B \longrightarrow C$ in a) o-bromotoluene	h) m-bromotoluene			
12. Consider the following set of reactions, Phenol $A \xrightarrow{a \ B^{r_2} \rightarrow B}$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{ka} = 2.34$ $+NH_3$ $p^{kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		c) p-bromotoluene	d) 3-bromo-2.4.6-trichlor	otolnene		
$\begin{array}{c} conc.H_{2}SO_{4} \\ \hline A & \xrightarrow{Br_{2}} B \\ a) 2,4-dibromophenol & b) 2,4,6-tribromophenol \\ c) 3-bromobenzenesulphonic acid & d) 3,5-dibromophenol \\ 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal & b) 3-hydroxy-2-methylhexanal \\ c) 2-ethyl-3-hydroxypentanal & d) 2-ethyl-3-hydroxyhexanal \\ 14. Increasing p^{k} values of O - , m - , p-toluidines is a) p < m < o b 0 < m < p c (p < o < m) d (m < o < p)15. Find the isoelectric point of the given amino acidCH - CH - COO - P^{K_{0}} = 2.34 +NH_{3} P^{K_{0}} = 4.32 a) 3.3 b b 6.66 c (c) 6.01 d (c) 3.6716. The catalyst used for olefin polymerization isa) Ziegler-Natta catalyst b Wilkinson catalystc$ Raney nickel catalyst d Merrified resin	12.	Consider the following set of reactions,	<i>c) c c.cc _,.,c cc</i>			
Phenol $A \xrightarrow{Br_3} B$ a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		$conc.H_2SO_4$				
a) 2,4-dibromophenol b) 2,4,6-tribromophenol c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		Phenol Δ $A \xrightarrow{Br_2} B$				
c) 3-bromobenzenesulphonic acid d) 3,5-dibromophenol 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p ^k values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $i + NH_3$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		a) 2,4-dibromophenol	b) 2,4,6-tribromophenol			
 13. The cross Aldol product formed when propanol acts as the electrophile and butanal as nucleophile is a) 3-hydroxy-2-methylphentanal b) 3-hydroxy-2-methylhexanal c) 2-ethyl-3-hydroxypentanal d) 2-ethyl-3-hydroxyhexanal 14. Increasing p^k values of O - , m - , p-toluidines is a) p < m < o b) o < m < p c) p < o < m d) m < o < p 15. Find the isoelectric point of the given amino acid CH - CH - COO - P^{Ka} = 2.34 +NH₃ p^{Kb} = 4.32 a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst c) Raney nickel catalyst d) Merrified resin 		c) 3-bromobenzenesulphonic acid	d) 3,5-dibromophenol			
nucleopnile isa) 3-hydroxy-2-methylphentanalb) 3-hydroxy-2-methylhexanalc) 2-ethyl-3-hydroxypentanald) 2-ethyl-3-hydroxyhexanal14. Increasing p ^k values of O - , m - , p-toluidines isa) $p < m < o$ a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ \downarrow \downarrow $p^{Kb} = 4.32$ a) 3.3b) 6.66c) 6.01c) The catalyst used for olefin polymerization isa) Ziegler-Natta catalystb) Wilkinson catalystc) Raney nickel catalystd) Merrified resin	13.	The cross Aldol product formed when prop	panol acts as the electron	ophile and butanal as		
a) 3-hydroxy-2-methylphentaliab) 3-hydroxy-2-methylnexaliac) 2-ethyl-3-hydroxypentanald) 2-ethyl-3-hydroxyhexanal14. Increasing p^{k} values of O - , m - , p-toluidines isa) $p < m < o$ a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $k = 1, 2, 34$ $p^{Kb} = 4.32$ a) 3.3b) 6.66 c) 6.01 16. The catalyst used for olefin polymerization isa) Ziegler-Natta catalystb) Wilkinson catalystc) Raney nickel catalystd) Merrified resin		nucleophile is	b) 2 bydrawy 2 mathylba	vanal		
14. Increasing p^{k} values of O - , m - , p-toluidines is a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid CH - CH - COO - $P^{Ka} = 2.34$ \downarrow $+NH_{3}$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin		a) 3-ityuloxy-z-meinyiphenianai	d) 2 othyl 2 hydroxyboxo			
a) $p < m < o$ b) $o < m < p$ c) $p < o < m$ d) $m < o < p$ 15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	14	$r_{\rm c}$ 2-ettry-3-rigutoxyperitarial	u) 2-etiiyi-3-nyuloxynexe	lia		
15. Find the isoelectric point of the given amino acid $CH - CH - COO - P^{Ka} = 2.34$ $+NH_3$ $P^{Kb} = 4.32$ a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	17.	a) $n < m < n$ b) $n < m < n$	c) $n < 0 < m$	d) $m < o < n$		
a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin	15.	Find the isoelectric point of the given amino aci $CH - CH - COQ - P^{Ka} = 2.34$	d			
 a) 3.3 b) 6.66 c) 6.01 d) 3.67 16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin 						
16. The catalyst used for olefin polymerization is a) Ziegler-Natta catalystb) Wilkinson catalystc) Raney nickel catalystd) Merrified resin		$+NH_3$ $P^- = 4.32$	c) 6.01	d) 3.67		
 a) Ziegler-Natta catalyst b) Wilkinson catalyst c) Raney nickel catalyst d) Merrified resin 	16.	The catalyst used for olefin polymerization is	0, 0.01	u) 0.07		
c) Raney nickel catalyst d) Merrified resin		a) Ziegler-Natta catalyst	b) Wilkinson catalyst			
		c) Raney nickel catalyst	d) Merrified resin			

17.	Zinc sulphate contains 22.65% of zinc and 43.9% of water of crystallization. If the law of constant			
	proportions is true , then the	ne weight of zinc requir	red to produce 20g of the c	rystal will be
40	a) 45.3g b)) 4.53g	C) 0.453g	C) 453g
18.	line relationship between	the wavelength λ asso	oclated with a moving par	licie of mass im and its
	$\frac{2h}{2}$	1 h	h h	$\sqrt{2mE}$
	a) $\lambda = \frac{2\pi}{\sqrt{mE}}$ b)	$\lambda = \frac{1}{2} \frac{n}{\sqrt{mE}}$	c) $\lambda = \frac{n}{\sqrt{2mE}}$	d) $\lambda = \frac{\sqrt{2mB}}{h}$
19.	One litre of a gas weights	s 2g at 300K and 1at	m pressure. If the pressu	re is made 0.75atm, at
	which of the following tem	peratures will one litre	of the same gas weigh o	ne gram?
00	a) 450K b)) 600K	c) 800K	d) 900K
20.	I ne latent neat of vapouri	ization of a liquid at 50	JUK and fatm pressure is	10.0Kcal/mol. What will
	be the change in internal e	energy of 3mol of the l	liquid at the same tempera	ature & pressure?
~ (a) 27.0kcal b)) 13.0kcal	c) -27.0kcal	d) -13.0kcal
21.	For the following three re	eactions, equilibrium c	constants are given Which	n of the following three
	reactions is correct?			
	a) $K_3 = K_1 + K_2$ b)	$) K_3 K_2^2 = K_1^2$	c) $K_1 \sqrt{K_2} = K_3$	d) $K_2 K_2 = K_1$
22.	The p ^{Ka} of 0.1M acetic aci	d solution is 4.78. The	e p ^H of the solution will be	
	a) 1.89 b)) 8.89	c) 4.89	d) 2.19
23.	The hybrid state of S in So	O ₂ is similar to that of		
	a) $C inC_2H_4$ b)) C in C ₂ H ₄	c) C in CH₄	d) C in CO ₂
24.	The pair of compounds ha	aving metals in their hi	ghest oxidation state is	
	a) MnO ₂ , FeC l_3 b)) Mn <i>0</i> ₄ ⁻ , CrO ₂ C <i>l</i> ₂	c) [Fe(CN) ₆] ³⁻ , [Co(CN) ₃]	d) [NiCl₄] ²⁻ , [CoCl₄]
25.	Element with atomic numb	ber 56 belongs to whic	h block?	
	a) s b)) p	c) d	d) <i>f</i>
26.	One would expect proton	to have a very large		
	a) Charge b)) lonization enthalpy	c) Hydration energy	d) radius
27.	For alkali metals, which of	f the following trends is	s incorrect?	
	a) Hydration energy: Li >	> Na > K > Rb	b) Ionization enthalpy: Li	> Na > K > Rb
	c) Density: $Li < Na < K$	< Rb	d) Atomic size: Li < Na <	K < Rb
	ſ			
28.	The IUPAC name of	is		
		~0~		
	a) Oxocyclohex-1-ene b)) Oxocyclohex-2-ene	c) Oxocyclohex-2-ene	d) Oxocyclohex-1-ene
29.	Which of the following cor	npounds will answer L	assaigne's test for nitroge.	en?
	a) NH_2NH_2 b)) NH₄C <i>l</i>	c) NaCN	d) NaNO ₃
30.	What happens when Cl ₂ /H	H_2O (HOCl) adds to $l-l_2O$	butyne?	
	a) $CH_3CH_2COCHCl_2$ b)) CH ₃ CH ₂ COCH ₂ C <i>l</i>	c) CH₃CH(C <i>l</i>)-CHO	d) $CH_3CH(Cl)COCH_2Cl$
31.	In a primitive cubic lattice,	, the percentage of voi	d volume is	
	a) 52.36% b)) 25.95%	c) 74.05%	d) 47.64%
32.	A compound formed by el	lement A and B crysta	llises in the cubic structure	e where A atoms are at
	the corners of the cube ar	nd B atoms are at the f	face centres. The formula	of the compound is
	a) AB_3 b)) AB	c) A ₃ B	d) A_2B_2
33.	2N HCl will have the same	e molar concentration	as	
	a) $0.5N-H_2SO_4$ b)) 1.0M-H ₂ SO ₄	c) 1N-H ₂ SO ₄	d) 4N-H ₂ SO ₄
34.	The values of observed a	and normal molar mas	sses of acetic acid are 11	18 and 60 respectively.
	The Van't Hoff factor is			
	a) 1.97 b)) 0.51	c) 0.9	d) 1.6
35.	In an electrochemical cell,	, the half cell reaction a	and their oxidation potenti	als are:
	$Zs(s) \rightarrow Zn^{2+}(aq) + 2e^{-}$ ($E^0 = +0.76V$)			
	$Ag(s) \rightarrow Ag^{+}(aq) + e^{-}$ (E ⁰ = -0.80V) Which of the following reactions actually occurs?			
	a) $Zn^{2+}(aq) + 2Aq(s) \rightarrow Z$	In(s) + 2Ag⁺(aq)	b) $Zn(s) + 2Ag^{+}(aq) \rightarrow Zr$	1 ²⁺ (aq) + 2Ag(s)
	,	· · · · · · · · · · · · · · · · · · ·	.,	

		2.	0.		
	c) $Zn(s) + Ag^{+}(aq) \rightarrow Zn^{2+}(aq) + Ag(s)$ d) $Zn^{2+} + Ag(s) \rightarrow Zn(s) Ag^{+}(aq)$				
36.	Which of the following relations is correct for Kohlrausch's law?				
	a) $\alpha = \frac{A}{A^0}$	b) $\lambda^0_+ \times \lambda^0 = A^0$	c) $\lambda^0_+ = A - \lambda^0$	d) $\frac{A^0}{\lambda_1^0} = \lambda^0$	
37.	Rate constant depends	s on		Ť	
	a) Temperature	b) Time	c) Initial conc.	d) None of these	
38.	For reaction N ₂ +3H ₂ \rightarrow	$2NH_3 \text{ if } \xrightarrow{\Delta[NH_3]} = 2 \text{ x}$	10^{-4} mol L ⁻¹ s ⁻¹ , the value of	of $-\xrightarrow{\Delta[H_2]}$ would be	
	a) 1×10^{-4} mol 1^{-1}	Δt	b) 2 × 10 ⁻⁴ mol 1^{-1}	Δt	
	a) 1×10^{-4} mol 1^{-1} s ⁻¹		b) 3×10^{-4} mol L ⁻¹ s ⁻¹		
39	$A_{S_2}S_2$ is a		d) 0 × 10 More 3		
00.	a) Negative sol		b) Positive sol		
	c) Neutral sol		d) May be positive or neg	gative sol	
40.	Physical adsorption is:				
	a) High specific		b) Irreversible		
	c) Considerable at hig	gh temperature	d) Not very specific		
41.	Autoreduction process	is used for the extraction	n of:		
	a) Cu and Pb	b) Zn and Hg	c) Cu and Al	d) Fe and Pb	
42.	. Electrolytic reduction method is used in extraction of:				
	a) High electronegative	ve elements	b) Metalloids		
	c) Transition metals		d) Highly electropositive	elements	
43.	Which of the following	hydrides of group 15 has	s maximum basic characte	er?	
	a) NH ₃	b) BiH ₃	c) AsH ₃	d) PH ₃	
44.	What type of hybridiza	tion is involved in SF_6 m	plecule?		
	a) sp ³	b) sp ³ d	c) sp ³ d ²	d) sp ³ d ³	
45.	In case of actinides, th	e degree of complex forr	nation decreases as:		
	a) $M^{4+} > M^{3+} > MO_2^2$	$^{+} > MO_{2}^{+}$	b) $M^{3+} > M^{4+} > MO_2^{2+} >$	MO_2^+	
	c) $M^{4+} > MO_2^{2+} > M^3$	$^{+} > MO_{2}^{+}$	d) $MO_2^{2+} > M^{4+} > MO_2^+ >$	> M ³⁺	
46.	Lead acetate paper tur	rns black on exposure to	:		
	a) CO ₂	b) H ₂ S	c) SO ₂	d) NO ₂	
47.	Amongst Ni(CO) ₄ , [Ni(CN ₄)] ²⁻ and [NiCl ₄] ²⁻ :			
	a) Ni(CO) ₄ and NiCl ₄ ²	are diamagnetic and [N	i(CN) ₄] ²⁻ is paramagnetic		
	b) NiCl ₄ ²⁻ and [Ni(CN)	$_{4}$] ²⁻ are diamagnetic and	Ni(CO) ₄ is paramagnetic		
	c) Ni(CO) ₄ and [Ni(CN	$ _{4} ^{2}$ are diamagnetic and	d NiCl ₄ ²⁻ is paramagnetic		
	d) Ni(CO)₄ is diamagr	netic and NiCl₄ ²⁻ and [Ni(CN)₄1 ²⁻ are diamagnetic		
48.	The EAN of copper in	[Cu(NH₃)₄] ²⁺ is (atomic n	umber of $Cu = 29$):		
	a) 35	b).36	c) 34	d) 37	
10	Identify 7 in the reaction	5/00	0,01		
ч 0.	alc. KOH Br ₂ k	ICN			
	$C_2H_5I \longrightarrow X \longrightarrow Y$	$\rightarrow Z$			
	a) CH ₃ CH ₂ CN	b) CNCH ₂ CH ₂ CN	c) BrCH ₂ CH ₂ CN	d) BrCH = CHCN	
50.	In SN_1 reactions, the o	rder r of reactivity of hali	des is :		
	a) $3^0 > 2^0 > 1^0 > me$	thyl	b) methyl $1^0 > 2^0 > 3^0$		
_ /	c) $3^0 > 2^0 > methyl >$	> 1 ⁰	d) $2^0 > 1^0 > \text{methyl} > 3^0$)	
51.	in the reaction,				

