Resonance®
Educating for better tomorrow

JEE (Main)

PAPER-1 (B.E./B. TECH.)

2023

COMPUTER BASED TEST (CBT)
Questions & Solutions

Date: 25 January, 2023 (SHIFT-1) | TIME : (9.00 a.m. to 12.00 p.m)

Duration: 3 Hours | Max. Marks: 300

SUBJECT: CHEMISTRY

Resonance Eduventures Ltd.

Reg. Office & Corp. Office : CG Tower, A-46 & 52, IPIA, Near City Mall, Jhalawar Road, Kota (Raj.) - 324005

Ph. No.: +91-744-2777777, 2777700 | **FAX No. :** +91-022-39167222

To Know more : sms **RESO** at **56677** | **Website :** www.resonance.ac.in | **E-mail :** contact@resonance.ac.in | **CIN :** U80302RJ2007PLC024029

Toll Free : 1800 258 5555 **7340010333** facebook.com/ResonanceEdu twitter.com/ResonanceEdu www.youtube.com/resowatch blog.resonance.ac.in

This solution was download from Resonance JEE (Main) 2023 Solution portal

PART : CHEMISTRY

31. Inert gases have positive electron gain enthalpy. Its correct order is

(1) He < Ne < Kr < Xe (2) He < Xe < Kr < Ne

(3) He < kr < Xe < Ne (4) Xe < Kr < Ne < He

NTA. (2)

RESO (2)

Sol.

Noble gas	He	Ne	Ar	Kr	Xe
Electron gain enthalpy (kJ/mole)	48	116	96	96	77

32. The radius of the 2nd orbit of Li^{2+} is x. The expected radius of the 3rd orbit of Be^{3-} is :

(1) $\frac{16}{27}x$ (2) $\frac{4}{9}x$ (3) $\frac{9}{4}x$ (4) $\frac{27}{16}x$

NTA. (4)

RESO (4)

Sol. $R = 0.529 \times \frac{n^2}{Z}$

$$(r_{Li^{2+}})_{n=2} = 0.529 \times \frac{(2)^2}{3} = x$$

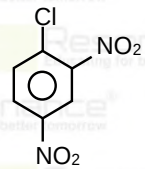
$$(r_{Be^{3+}})_{n=3} = 0.529 \times \frac{(3)^2}{4}$$

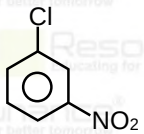
$$\frac{(r_{Li^{2+}})_{n=2}}{(r_{Be^{3+}})_{n=3}} = \frac{\frac{r_0 \times (2)^2}{3}}{\frac{r_0 \times (3)^2}{4}}$$

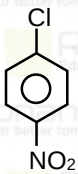
$$\frac{x}{(r_{Be^{3+}})_{n=3}} = \frac{16}{27}$$

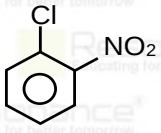
$$\therefore \quad (r_{Be^{3+}})_{n=3} = \frac{27x}{16}$$

33. The compound which will have the lowest rate towards nucleophilc aromatic substitution on treatment with OH^- is :

(1) 

(2) 

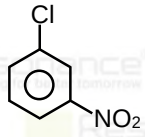
(C) 

(C) 

NTA. (2)

RESO (2)

Sol.



Chlorobenzene with strong EWG (i.e. $-NO_2$) undergoes nucleophilic aromatic substitution at faster rate with OH^-.

34. Reaction of thionyl chloride with white phosphorus forms a compound [A], which on hydrolysis gives [B] a dibasic acid. [A] and [B] are respectively

(1) P_4O_6 and H_3PO_3 (2) PCl_5 and H_3PO_3 (3) PCl_3 and H_3PO_3 (4) $POCl_3$ and H_3PO_4

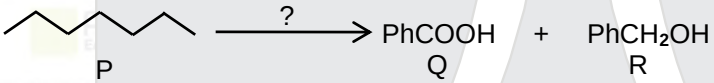
NTA. (3)

RESO (3)

Sol. $P_4 + 8SOCl_2 \rightarrow \underset{(A)}{4PCl_3} + 4SO_2 + 2S_2Cl_2$

$\underset{(A)}{PCl_3} + 3H_2O \rightarrow \underset{(B)}{H_3PO_3} + 3HCl$

35.



The correct sequence of reagents for the preparation of Q and R is:

(1) (i) Cr_2O_3, 770 K, 20 atm; (ii) CrO_2Cl_2, H_3O^-; (iii) NaOH; (iv) H_3O^-

(2) (i) Mo_2O_3, Δ; (ii) CrO_2Cl_2, H_3O^-; (iii) NaOH; (iv) H_3O^-

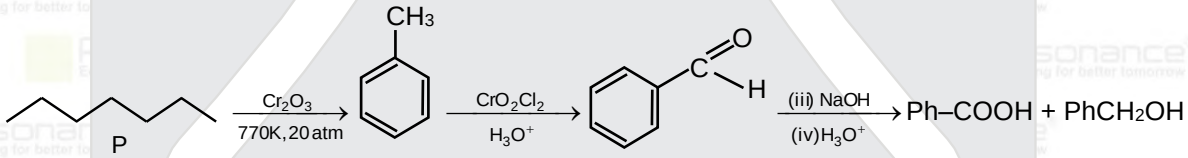
(3) (i) CrO_2Cl_2, H_3O^-; (ii) Cr_2O_3, 770 K, 20 atm; (iii) NaOH; (iv) H_3O^-

(4) (i) $KMNO_4$, OH^-; (ii) Mo_2O_3, Δ; (iii) NaOH; (iv) H_3O^-

NTA. (1)

RESO (1)

Sol.



Cannizaro reaction

36. Match the List-I with List-II;

List-I		List-II	
Cations		Group reagents	
A	Pb^{2-}, Cu^{2+}	(i)	H_2S gas in presence of dilute HCl
B	Al^{3-}, Fe^{3+}	(ii)	$(NH_3)_2CO_3$ in presence of NH_4OH
C	Co^{2+}, Ni^{2+}	(iii)	NH_4OH in presence of NH_4Cl
D	Ba^{2+}, Ca^{2+}	(iv)	H_2S in presence of NH_4OH

(1) A $\rightarrow$ iv, B $\rightarrow$ ii, C $\rightarrow$ iii, D $\rightarrow$ I (2) A $\rightarrow$ i, B $\rightarrow$ iii, C $\rightarrow$ ii, D $\rightarrow$ iv

(3) A $\rightarrow$ iii, B $\rightarrow$ i, C $\rightarrow$ iv, D $\rightarrow$ ii (4) A $\rightarrow$ i, B $\rightarrow$ iii, C $\rightarrow$ iv, D $\rightarrow$ ii

NTA. (4)

RESO (4)

Sol. Related with qualitative analysis (Cations).

37. Compound A reacts with NH_4Cl and forms a compound B. Compound B reacts with H_2O and excess of CO_2 to form compound C which on passing through or reaction with saturated NaCl solution forms sodium hydrogen carbonate. Compound A, B and C, are respectively.

(1) $CaCl_2$, $NH_4^{\oplus}$, $(NH_4)_2CO_3$ (2) $CaCl_2$, NH_3, $NH4HCO_3$

(3) $Ca(OH)_2$, NH_3, NH_4HCO_3 (4) $Ca(OH)_2$, $NH_4^{\oplus}$, $(NH_4)_2CO_3$

NTA. (3)

RESO (3)

Sol. Reactions related with Solvay process

38. The correct order in aqueous medium of basic strength in case of methyl substituted amines is:

(1) $NH_3 > Me_3N > MeNH_2 > Me_2NH$ (2) $Me_2NH > Me_3N > MeNH_2 > NH_3$

(3) $Me_2NH > MeNH_2 > Me_3N > NH_3$ (4) $Me_3N > Me_2NH > MeNH_2 > NH_3$

NTA. (3)

RESO (3)

Sol. The observed basic strength order in aq. medium is $Me_2NH > MeNH_2 > Me_3N > NH_3$

39.

List-I Elements		List-II Colour imparted to the flame	
A.	K	I.	Brick Red
B.	Ca	II.	Violet
C.	Sr	III.	Apple Green
D.	Ba	IV.	Crimson Red

Choose the correct answer from the options given below:

(1) A – II, B – IV, C – I, D – III (2) A – IV, B – III, C – II, D – I

(3) A – II, B – I, C – III, D – IV (4) A – II, B – I, C – IV, D – III

NTA. (4)

RESO (4)

Sol.

Metal	K	Ca	Sr	Ba
Colour	Violet	Brick red	Crimson red	Apple green

40. Given-below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Acetal / Ketal is stable in basic medium.

Reason R: The high leaving tendency of alkoxide ion gives the stability to acetal / ketal in basic medium.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both A and R are true but R is NOT the correct explanation of A

(2) A is false but R is true

(3) A is true but R is false

(4) Both A and R are true and R is the correct explanation of A

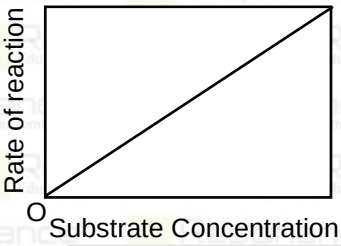
NTA. (3)

RESO (3)

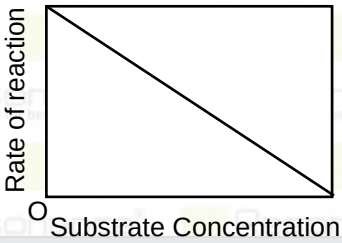
Sol. Acetals or ketals are stable in basic medium as alkoxide ion has poor leaving tendency.

41. The variation of the rate of an enzyme catalysed reaction with substrate concentration is correctly represented by graph

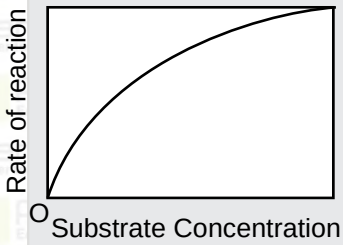
(a)



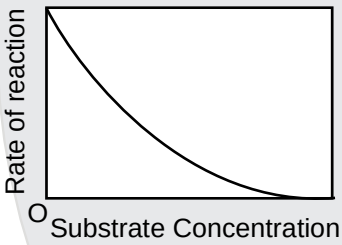
(b)



(c)



(d)



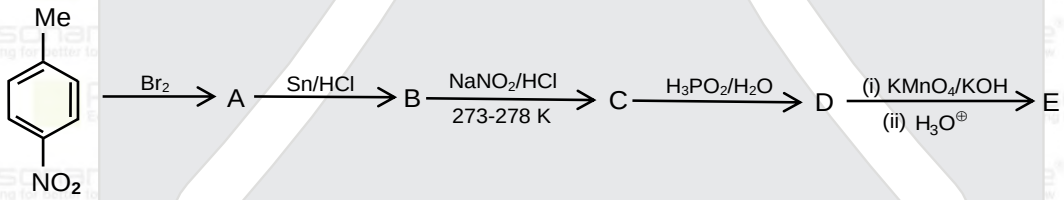
(1) (b) (2) (d) (3) (a) (4) (c)

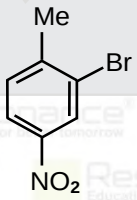
NTA. (4)

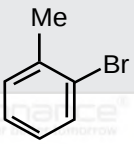
RESO (4)

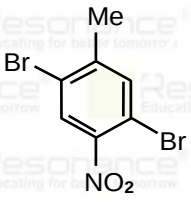
Sol. Fact based

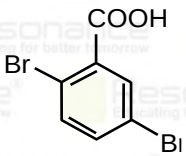
42. Identify the product formed (A and E)

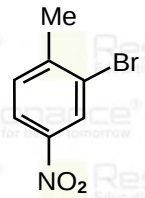


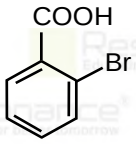
(1) A = 

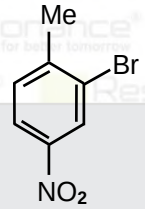
, E = 

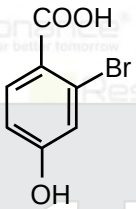
(2) A = 

, E = 

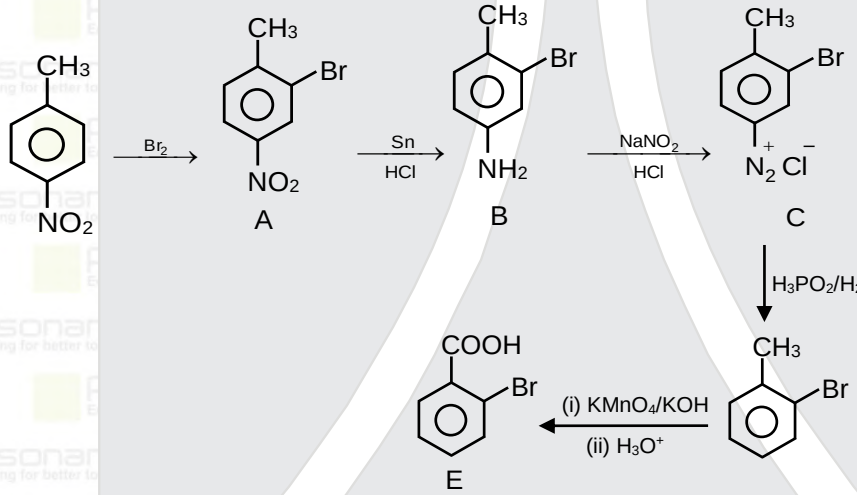
(3) A = 

, E = 

(4) A = 

, E = 

NTA. (3)
RESO (3)

Sol. 

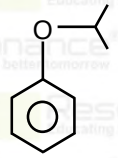
43. Which one the following reactions does not occur during extraction of copper?

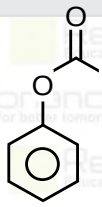
(1) $CaO + SiO_2 \rightarrow CaSiO_3$ (2) $2\,Cu_2S + 3\,O_2 \rightarrow 2\,Cu_2O + 2\,SO_2$

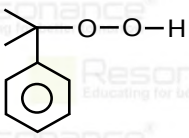
(3) $FeO + SiO_2 \rightarrow FeSiO_3$ (4) $2\,FeS + 3\,O_2 \rightarrow 2\,FeO + 2\,SO_2$

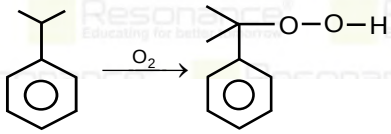
NTA. (1)
RESO (1)
Sol. Magnetic separation process is not involved during extraction of Cu.

44. In the cumene to phenol preparation in presence of air. the intermediate is

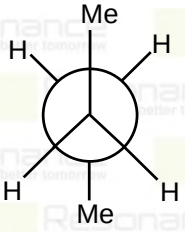
(1) 

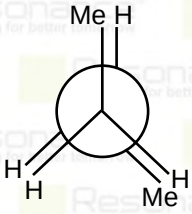
(2) 
(3) 

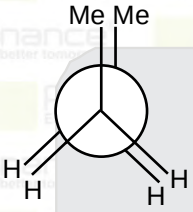
(4) 

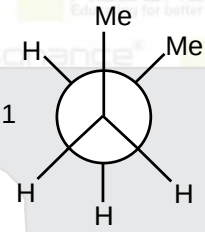
NTA. (4)
RESO (4)
Sol. 

45. Which of the following conformation will be the most stable?

(1) 

(2) 

(3) 

(4) 1 

NTA. (1)
RESO (1)
Sol. In the 1st option bulkly Me groups are at anti position. It has least eclipsing as well as least vander-waal strain.

46. '25 volume' hydrogen peroxide means
(1) 100 mL marketed solution contains 25 g of H_2O_2.
(2) 1 L marketed solution contains 75 g of H_2O_2.
(3) 1 L marketed solution contains 250 g of H_2O_2.
(4) 1 L marketed solution contains 25 g of H_2O_2.
NTA. (2)
RESO (2)
Sol. 25 V H_2O_2 means : 1 lit of H_2O_2 on decomposition give 25 lit of O_2(g) at NTP

$$2H_2O_2(\ell) \longrightarrow 2H_2O(\ell) + O_2(g)$$

$$2\left[\frac{25}{22.4}\right]\text{mole} \qquad \left[\frac{25}{22.4}\right]\text{mole}$$

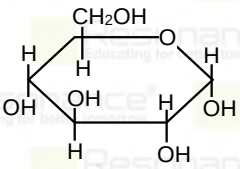
Mass of $H_2O_2 = \frac{2\times 25}{22.4}\times 34$

= 75.89 gram.

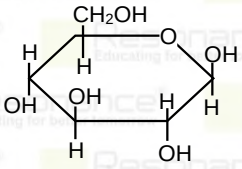
47. Which of the following statement is incorrect for antibiotics?
(1) An antibiotic must be a product of metabolism.
(2) An antibiotic should be effective in low concentrations.
(3) An antibiotic is a synthetic substance product as a structural analogue of naturally occuring antibiotic.
(4) An antibiotic should promote the growth or survival of microorganisms.
NTA. (4)
RESO. (4)
Sol. An antibiotic does not promote the growth or survival of microorganisms.

48. Match items of Row I with those of Row II.

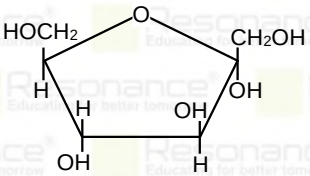
Row I :



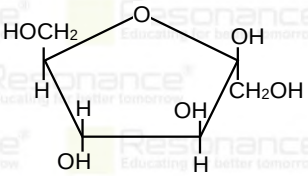
A



B



C



D

Row II :

(i) α–D- (–) – Fructofuranose (ii) β–D- (–) – Fructofuranose

(iii) α–D- (–) –Glucopyranose (iv) β–D- (–) – Glucopyranose

Correct match is

(1) A → (iii), B → (iv) , C → (ii) , D → (i)

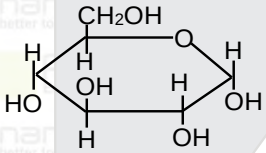
(2) A → (iv), B → (iii) , C → (i) , D → (ii)

(3) A → (iii), B → (iv) , C → (i) , D → (ii)

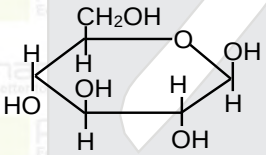
(4) A → (i), B → (ii) , C → (iii) , D → (iv)

NTA. (3)

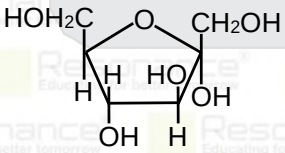
RESO (3)

Sol. (i) 

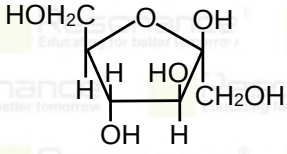
α–D- (–) –Glucopyranose

(ii) 

β–D- (–) – Glucopyranose

(iii) 

α–D- (–) – Fructofuranose

(iv) 

β–D- (–) – Fructofuranose

49. Some reactions of NO_2 relevant to photochemical smog formation are

$$NO_2 \xrightarrow{\text{sunlight}} X + Y$$

$$X \xrightarrow{A} B$$

Identify A, B, X and Y

(1) X = [O], Y = NO, A = O_2, B = O_3

(2) X = N_2O, Y = [O], A = O_3, B = NO

(3) X = $\frac{1}{2}O_2$, Y = NO_2 , A = O_3 , B = O_2

(4) X = NO, Y = [O], A = O_2, B = N_2O_3

NTA. (1)

RESO (1)

Sol.

$$NO_2 \xrightarrow{\text{sunlight}} \underset{X}{O} + \underset{Y}{NO}$$

$$O \xrightarrow{O_2} \underset{B}{O_3}$$

50. A cubic solid is made up of two elements X and Y. Atoms of X are present on every alternate corner and one at the center of cube. Y is at $\frac{1}{3}$rd of the total faces. The empirical formula of the compound is

(1) $X_2Y_{1.5}$ (2) $X_{2.5}Y$ (3) $XY_{2.5}$ (4) $X_{1.5}Y_2$

NTA. (2)

RESO. (Bonus)

Sol. X = 4 [corner] $\frac{1}{8}$ + 1[Body center]

$= \frac{1}{2} + 1 = \frac{3}{2}$

Y = $\frac{1}{3} \times 6$ [Face center] $\frac{1}{2}$

= 1

Formula $\Rightarrow X_{3/2}Y_1 = X_{1.5}Y_1$

51. A litre of buffer solution contains 0.1 mole of each of NH3 and NH4Cl . On the addition of 0.02 mole of HCl by dissolving. gaseous HCl , the pH of the solution is found to be _____ × 10–3 (Nearest integer)

[Given : $pK_b(NH_3)$] = 4.745

log 2 = 0.301

log 3 = 0.477

T = 298 K]

NTA. (9079)

RESO (9079)

Sol.

NH_3 + NH_4Cl

0.1 mole 0.1 mole

NH_3 + HCl $\longrightarrow$ NH_4Cl

0.1 mole 0.02 mole 0.1 mole

0.08 mole — 0.12 mole

$$pOH = pKb + \log \frac{[NH_4Cl]}{[NH_3]}$$

$$= 4.745 + \log \left(\frac{0.12}{0.08}\right)$$

$$= 4.745 + \log \left(\frac{3}{2}\right)$$

$$= 4.745 + [0.48 - 0.30]$$

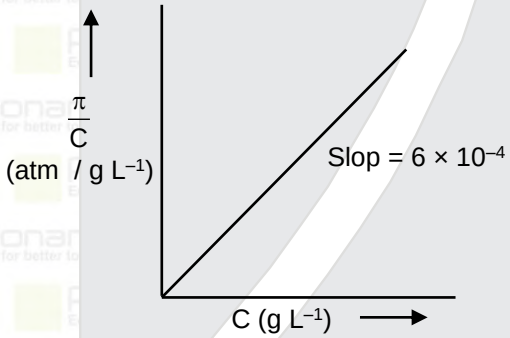
$$= 4.745 + 0.18$$

$$= 4.921$$

$$pH = 14 - 4.921$$

$$= 9.079$$

52. The osmotic pressure of solutions of PVC in cyclohexanone at 300 K are plotted on the graph . The molar mass of PVC is _____ g mol^{-1} (Nearest integer)



(Given : R = 0.083 L atm K^{-1} mol^{-1})

NTA. (41500)

RESO (41500)

Sol. Assuming π v/s C graph then slope = RT/M = $\frac{0.083 \times 300}{M}$ = 6×10^{-4} or M = 41500 g/mol

53. For the first order reaction A $\rightarrow$ B, the half life is 30 min. The time taken for 75% completion of the reaction is _____ min. ()Nearest integer

Given : log 2 = 0.3010

log 3 = 0.4771

log 5 = 0.6989

NTA. (60)

RESO. (60)

Sol. $t_{75\%} = 2t_{1/2}$ [For 1st order reaction]

$t_{75\%} = 2 \times 30 = 60$ min.

54. Consider the cell

$Pt(s) \mid H_2(g)\ (1\ atm) \mid H^+(aq, [H^+] = 1) \parallel Fe^{3+}(aq), Fe^{2+}(aq) \mid Pt(s)$

Given : $E^\circ_{Fe^{3+}/Fe^{2+}} = 0.771$ V and $E^\circ_{H^+/\frac{1}{2}H_2} = 0$ V , T = 298 K

If the potential of the cell is 0.712 V, the ratio of concentration of Fe^{2+} to Fe^{3+} is _____ (Nearest integer)

NTA. (10)

RESO (10)

Sol. Anode $\Rightarrow \frac{1}{2}H_2(g) \longrightarrow H^+(aq) + e^-$

Cathode $\Rightarrow Fe^{3+} + e^- \longrightarrow Fe^{2+}$

Overall $\frac{1}{2}H_2 + Fe^{3+} \xrightarrow{n=1} H^+ + Fe^{2+}$

$$E_{cell} = E^0_{cell} - \frac{0.059}{1}\log\frac{[Fe^{2+}]}{[Fe^{3+}]} \times \frac{[H^+]}{[P_{H_2}]^{\frac{1}{2}}}$$

$$0.712 = 0.771 - 0.059\log\frac{[Fe^{2+}]}{[Fe^{3+}]}$$

$$\log\frac{[Fe^{2+}]}{[Fe^{3+}]} = 1$$

$$\text{So } \frac{[Fe^{2+}]}{[Fe^{3+}]} = 10$$

55. In sulphur estimation, 0.471 g of an organic compound gave 1.4439 g of barium sulphate. The percentage of sulphur in the compound is _____(Nearest integer)

(Given : Atomic mass Ba : 137 u, S : 32 u, O : 16 u)

NTA. (42)

RESO (42)

Sol. $$\%\ \text{sulphur} = \frac{32}{233} \times \frac{\text{Weight of } BaSO_4 \text{ formed}}{\text{Weight of organic compound}} \times 100$$

$$= \frac{32}{233} \times \frac{1.4439}{0.471} \times 100 = 42.10$$

56. How many of the following metal ions have similar value of spin only magnetic moment in gaseous state?

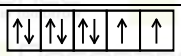
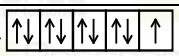
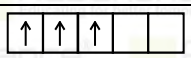
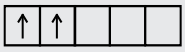
(Given : Atomic number : V, 23 ; Cr, 24 ; Fe, 26 ; Ni, 28)

V^{3+}, Cr^{3+}, Fe^{2+}, Ni^{3+}

NTA. (2)

RESO (2)

Sol.

	Ion	Unpaired electron	
(i)	Ni^{2+}	$3d^8 \Rightarrow$ 	No. of unpaired = 2 electron
(ii)	Fe^{2+}	$3d^6 \Rightarrow$ 	No. of unpaired = 4 electron
(iii)	Cu^{2+}	$3d^9 \Rightarrow$ 	No. of unpaired = 1 electron
(iv)	Cr^{3+}	$3d^3 \Rightarrow$ 	No. of unpaired = 3 electron
(v)	V^{3+}	$3d^2 \Rightarrow$ 	No. of unpaired = 2 electron

57. The density of a monobasic strong acid (Molar mass 24.2 g/mol) is 1.21 Kg/L. The volume of its solution required for the complete neutralization of 25 mL of 0.24 M NaOH is _____$\times 10^{-2}$ mL (Nearest integer)

NTA. (12)

RESO (12)

Sol. Molarity of acid = $\frac{1.2\times10^3}{24.2} = \frac{1000}{20} = 50$ M

Neutralization reaction :

$HA + NaOH \longrightarrow NaA + H_2O$

$M_1V_1 = M_2V_2$

$[50]\times V = [0.24 \times 25]$

$V = 00.12$ ml

58. The total number of lone pairs of electrons on oxygen atoms of ozone is .....

NTA. (6)

RESO (6)

Sol. 

59. An athlete is given 100 g of glucose ($C_6H_{12}O_6$) for energy. This is equivalent to 1800 KJ of energy. The 50% of this energy gained is utilized by the athlete for sports activities at the event . In order to avoid storage of energy, the weight of extra water he would need to perspire is _____g (Nearest integer)
Assume that there is no other way of consuming stored energy.
Given : The enthalpy of evaporation of water is 45 KJ mol^{-1}
Molar mass of C, H & O are 12, 1 and 16 g mol^{-1}

NTA. (360)

RESO (360)

Sol. $900 = n_{H_2O} \times 45$ or $n_{H_2O} = 20$ mol or 360 g

60. The number of paramagnetic species from the following is_____

$[Ni(CN)_4]^{2-}$, $[Ni(CO)_4]$, $[NiCl_4]^{2-}$

$[Fe(CN)_6]^{4-}$, $[Cu(NH_3)_4]^{2+}$

$[Fe(CN)_6]^{3-}$ and $[Fe(H_2O)_6]^{2+}$

NTA. (4)

RESO (4)

Sol.

S.No.	Species	E.C.	Hybridisation	Magnetic character
(i)	$[Ni(CN)_4]^{2-}$	$Ni^{2+} \Rightarrow 3d^8$	dsp^2	Diamagnetic
(ii)	$[NiCl_4]^{2-}$	$Ni^{2+} \Rightarrow 3d^8$	sp^3	Paramagnetic
(iii)	$[Cu(CN)_4]^{2+}$	$Cu^{2+} \Rightarrow 3d^9$	dsp^2	Paramagnetic
(iv)	$[Cu(CN)_4]^{3-}$	$Cu^{+} \Rightarrow 3d^{10}$	sp^3	Diamagnetic
(v)	$[Fe(CN)_6]^{3-}$	$Fe^{3+} \Rightarrow 3d^5$	d^2sp^3	Paramagnetic
(vi)	$[Fe(CN)_6]^{4-}$	$Fe^{2+} \Rightarrow 3d^6$	d^2sp^3	Diamagnetic
(vii)	$[Fe(H_2O)_6]^{2+}$	$Fe^{2+} \Rightarrow 3d^6$	sp^3d^2	Paramagnetic

Resonance®
Educating for better tomorrow

TO KNOW MORE
Call: 0744-2777777, 8441024095

TARGET: JEE (ADV.) 2023

Polish your subject knowledge with the guidance of
Top Notch Sr. Faculty of Resonance

SPARK

15 WEEKS COMPAC COURSE

OFFLINE / ONLINE

CLASS STARTS
6th FEBRUARY 2023

ACADEMIC FEATURES

- Course Duration: **15** Weeks
- Total No. of Lectures: **234** (P: 78 | C: 78 | M: 78)
- Duration of One Lecture: **1.5 hrs.** (90 Minutes)
- Classroom Teaching Hours.: **351** Hrs.
- Testing Duration: **60** Hrs.
- Total Academic Hours.: **411** Hrs.

Course Features

- Study Material
- Doubt Classes
- Back up support of recorded lectures
- Part/ Full Syllabus Test Series

Facilities for Offline Students

- In-house Computer Lab
- Self Study Rooms for Boys & Girls

TARGET: JEE (Main) 2023

Boost your Percentile with

PERCENTILE BOOSTER COURSE

8 WEEKS COMPAC COURSE

OFFLINE / ONLINE

CLASS STARTS
6th FEBRUARY 2023

COURSE FEATURES

- Complete Course Coverage
- 25 Chapter wise Test
- Regular Practice through 33 Daily Online Practice Test
- 5 Full Syllabus Test
- 3 Joint Preparatory Test
- Approx 2500 practice Que.
- 113 Teaching hours
- 99 Testing Hours
- Regular Test discussion classes for concept clearance
- Back up support of recorded lectures

Resonance®
Educating for better tomorrow

JEE (ADVANCED) 2022 RESULT

RESONites ने फिर लहराया सफलता का परचम

STUDENTS FROM CLASSROOM PROGRAM (OFFLINE/ ONLINE)

AIR 6

AIR-1 GEN-EWS

KARTHIKEYA POLISETTY
Roll No.: 21925115

AIR 8

DHEERAJ KURUKUNDA
Roll No.: 21925114

Students in TOP-100 All India Ranks (AIRs)

AIR-11
DEEVYANSHU MALU
Roll No.: 21219044

AIR-15
ABHIJEET ANAND
Roll No.: 21925116

AIR-35
SANSKAR SHAURYA
Roll No.: 21925113

AIR-50
ANIRUDH GARG
Roll No.: 21220122

AIR-54
SOUMITRA D. NAYAK
Roll No.: 21220554

AIR-58
KANISHK SHARMA
Roll No.: 21220454

ADMISSIONS OPEN FOR ACADEMIC SESSION 2023-24

TARGET: JEE (Adv.) 2024
for Class XII Passed Student
VISHESH COURSE
MODE: OFFLINE / ONLINE
CLASS STARTS 10th & 17th April

TARGET: JEE (Main) 2024
for Class XII Passed Student
ABHYAAS COURSE
MODE: OFFLINE / ONLINE
CLASS STARTS 10th & 24th April

SCHOLARSHIP ON THE BASIS OF JEE (MAIN) 2023 %ILE / AIR

Resonance Eduventures Limited
REGISTERED & CORPORATE OFFICE: CG Tower, A-46 & 52, IPIA, Near City Mall, Jhalawar Road, Kota (Rajasthan) - 324005
Tel. No.: 0744-2777777, 2777700 | **CIN:** U80302RJ2007PLC024029

Social Media Connect

83067 41444 | youtube.com/@ResonanceEdu | t.me/OfficialResonance
facebook.com/ResonanceEdu | instagram.com/resonance_edu | in.linkedin.com/school/resonance-eduventures-ltd/ | twitter.com/ResonanceEdu