

(2)

reducing agent it is".

keaj Ce otes nŠ ūen yeeFŪes ekeā DeDeesŪeeKele ŌkeāLeve
melŪe nŵŪee DemelŪe :

ekreāmeer Fuckeršēē keāc ceevekeā Fuckeršēē eŪeYeJe epelevee DeDekeā
neŪee nŵ Jen GŪevee ner Ōyeyue DeheŪeeŪekeā neŪee nŵ

(ii) Of the two $\text{La}(\text{OH})_3$ and $\text{Lu}(\text{OH})_3$ which is more basic and why?

$\text{La}(\text{OH})_3$ SŪeced $\text{Lu}(\text{OH})_3$ cellmes keācwe DeDekeā #eej eŪe
nŵDeej keŪeeŪe

(iii) Why First Ionization energies of 5d elements are higher than those of 3d and 4d elements?

5d ŪeŪeeŪekeāer ŌeLece DeDeŪeeŪekeā Tpee&SŪeced 4d ŪeŪeeŪe
keŪeeŪeDeDekeā neŪee nŵ

(iv) Which of the following will behave as an acid in liquid sulphur dioxide and why?

K_2SO_3 , SOCl_2 , $\text{SO}(\text{CNS})_2$, CaSO_3
eŪecveeŪeeKele cellmes keācwe ōJe meŪheāj [eFDeekeāneeF [cel
Decue keāer Ūej n ŪŪeŪeej keājsee Deej keŪeeŪe
 K_2SO_3 , SOCl_2 , $\text{SO}(\text{CNS})_2$, CaSO_3

(3)

(v) Why Lanthanides do not form oxycations?
ueŵLeeveeF [me Deekāneeer ŌeeveeŪee keŪeeŪevenerŪyeevees nŵ

(vi) Why do Actinides exhibit +4, +5 and +6 oxidation state whereas Lanthanides exhibit a maximum of +4 oxidation state?
SkešerreeF [the ekeāneeŪeS +4, +5 SŪeced+6 Deekāneekeāj keā
DeŪemLee ŌeeŪeŪe keāj Ūesnŵpeyekeā ueŵLeeveeF [me DeDekeālece
+4 Deekāneekeāj keā DeŪemLee ŌeeŪeŪe keāj Ūes nŵ

(vii) $[\text{Co}(\text{NH}_3)_6]^{3+}$ ion is diamagnetic while $[\text{CoF}_6]^{3-}$ ion is paramagnetic explain?
 $[\text{Co}(\text{NH}_3)_6]^{3+}$ DeDeve hej eŪegyekeāeŪe nŵ peyekeā
 $[\text{CoF}_6]^{3-}$ DeDeve Deveg ŪegyekeāeŪe nŵ keŪeeŪe

(viii) Which one of the two cobalt ions Co^{2+} and Co^{3+} should be better oxidising agent and why?

Co^{2+} SŪeced Co^{3+} keācyeeuŠ DeDeveeŪecellmes ekeāneekeāc
DeŪŪe Deekāneekeāj keā DeŪeŪeācŪeā neŪee ŪeeŪnS Deej keŪeeŪe

(ix) How is free energy change related to the standard potential.

cegeā Tpee&DevŪej ceevekeā eŪeYeJe mes keāmes mecyeeŪeŪe nŵ

(6)

- (i) $[Ag(CN)_2]Cl$
- (ii) $K[Pt(NH_3)Cl_5]$
- (iii) $K_3[Fe(CN)_6]$
- (iv) $Na_3[Co(NO_2)_6]$
- (v) $[Co(NH_3)_6]Cl_3$

Discuss with suitable examples the various type of isomerism in coordination compounds.

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- (v) $[Co(NH_3)_6]Cl_3$

5. Discuss with suitable examples the various type of isomerism in coordination compounds.

GheUegä Goenj CeelWmeefn le GhemenmedUeep ekeä Ueemf ekeäW cellW eelV eVe Ue ekeä j keäer meeceUeUeJeeDeelWkeäe JeCeUe keäep eS- 7 1/2

(7)

Unit - III

FkääF- III

6. Give electronic configuration of Lanthanides and justify their position in the periodic table explain lanthanides contraction and its consequences. 7 1/2

Fuekää ekeä eUeUeeme odes n§ Deele e mee j Ceer cellW eUeUe eF [the keäer efnLele keäes Gefele "njeF Ues uevLeveeF [meheUe S Jeced Fmekeä heej CeceelWkeäer JUeekUee keäep eS-

7. Point out similarities and differences between lanthanides and Actinides. Describe through flow sheet diagram for the separation of Neptunium (Np) and plutonium (Pu) from Uranium (${}_{92}U^{238}$). 7 1/2

uevLeveeF [the S Jeced Skeä eUeUeF [me keä ceUe meecevelee Je eUeUeUe Ffitele keäej Ues Ue j eUeUe (${}_{92}U^{238}$) mesveUeUeUeUe (Np) leLee huetSevUeUe (Pu) keä he ekeä j Ce keäer UeUeern Meeš Ée j e JUeekUee keäep eS-