Sulphur :-

Crystaline

1. Rhombic (α)
2. Monoclinic (β)

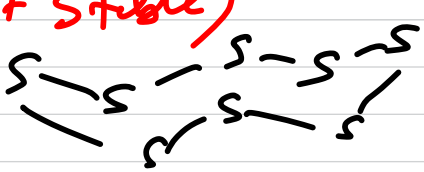
(both diffn in CS_2
Non diffuse in water)

95.6°C

Rhombic sulph ⇌ Monoclinic

(α) (granular solid) (β) (needle shape crystals)

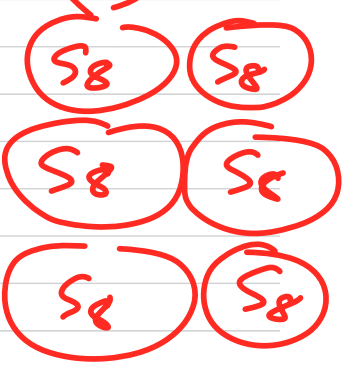
(Th. most stable)



$\mu = 0$

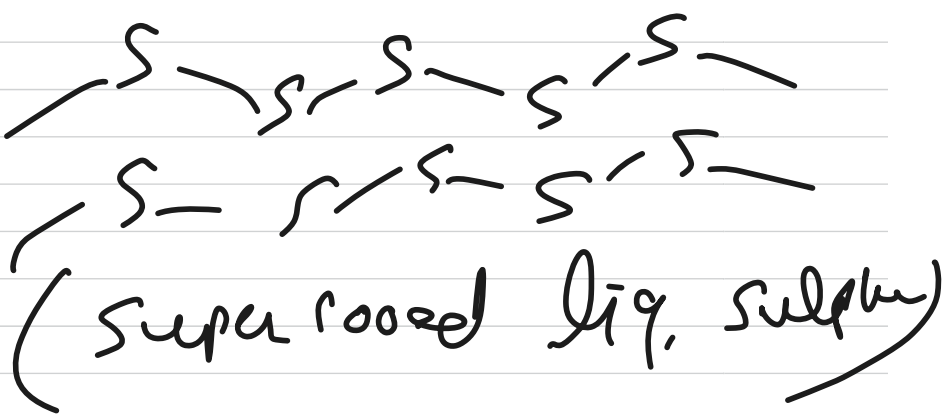
Amorphous

1. Plastic sulph
2. Colloidal sulph



Plastic sulphur –

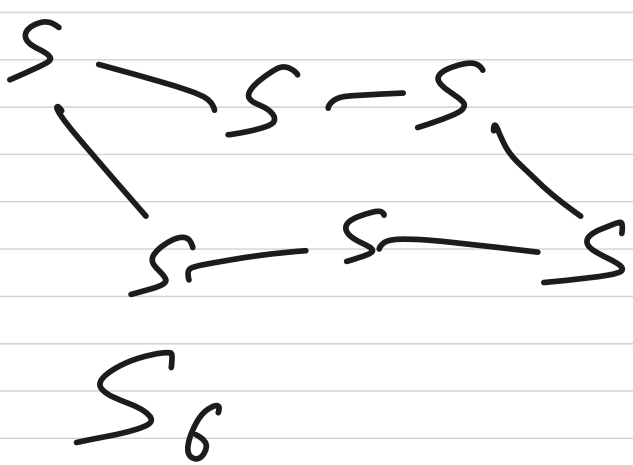
→ Plastic Solid
(Plastic sulphur)



Colloidal sulphur

$$SO_2 + 2H_2S \rightarrow \frac{3}{8}S_8 + 2H_2O$$

Angel sulphur.



Vapour of (S_2) sulphur contain small amt of

$S{=}S$

(Blue) $\pi^* 3d_{xy} : \pi 3d_{xy}$

(Paramagnetic)

RACE # 13

M.M. : 36

Only one correct :

1. Ans. (D)

2. Ans.(C)

3. Ans. (C)

4. Ans.(A)

Paragraph for Q. No. 5 to 6

5. Ans.(C)

6. Ans.(D)

One or more than one option(s) is/are correct

7. Ans.(A, B, D)

8. Ans. (A, D)

Subjective :

9 Ans. (5)

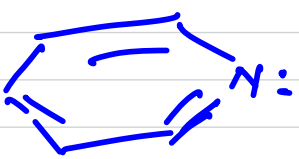
10. Ans (3)

11. Ans.(4)

Classification of ligand on the basis of denticity

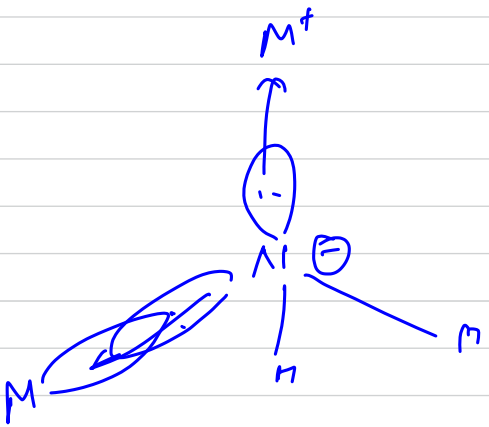
NH_3 Mono

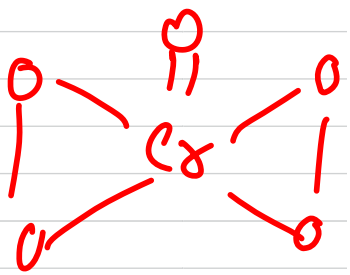
CH_3-NH_2 Mono

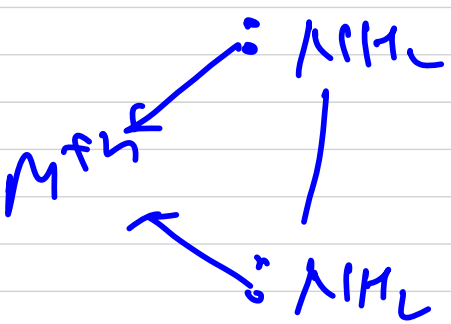
 Mono

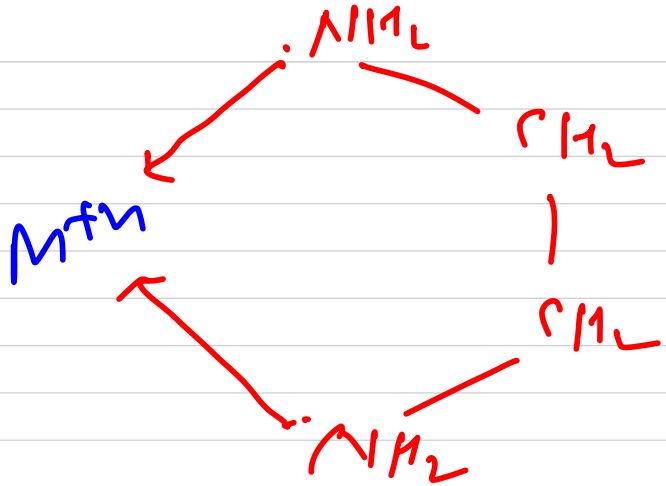
$:NH_2^-$ Mono

NH_2-NH_2 = Mono



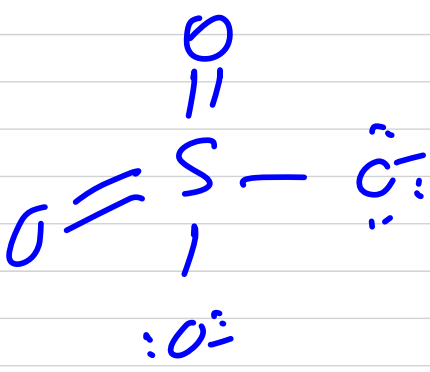


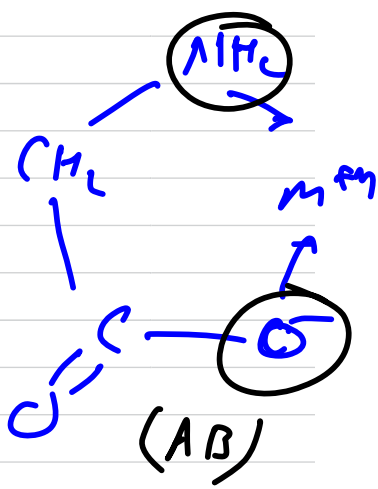




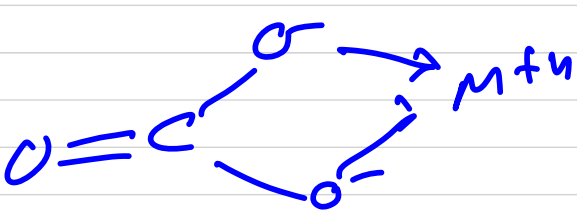
(A A)

en: bidented/ didented





(A B)



SO_4^{2-} Mono

CO_3^{2-} = Mono

O^{2-} = Mono

PO_4^{3-} = Mono

NH^{2-} = Mono

bn = bi

Cl^- = Mono

pn = bi
(AB)

Cl_y^{-1} = di
(AB)

$C_2O_4^{2-}$ = bi
(AA)

NO_3^- = Mono

$\overline{OAc}$ = Mono

N^{3-} = Mono

$\overline{Ac}$ = Mono

oxine^{-1} bi
(AB)

imda^{2-}
(imido diacetate)
(tridentate)

acac^{-1}
(bidented)
(AA)

tn
(bidented)

dien = tridented

EDTA^{4-}
(Hexa)

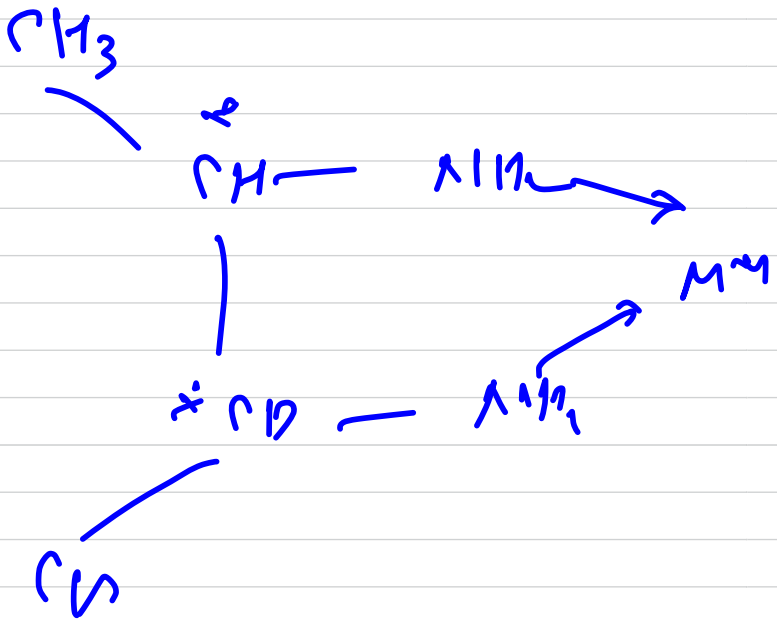
trien = tetra

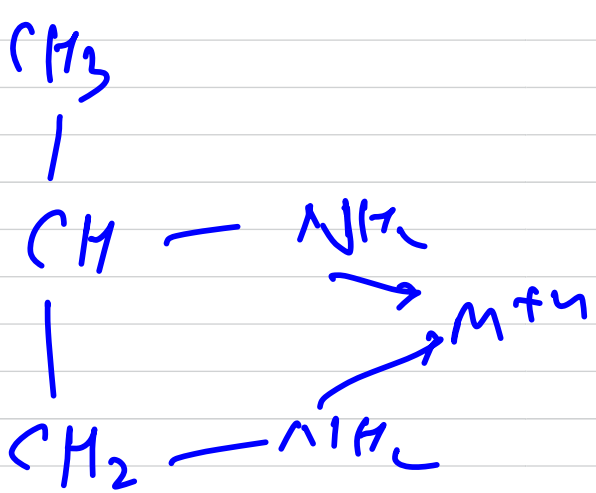
DTPA^{5-}

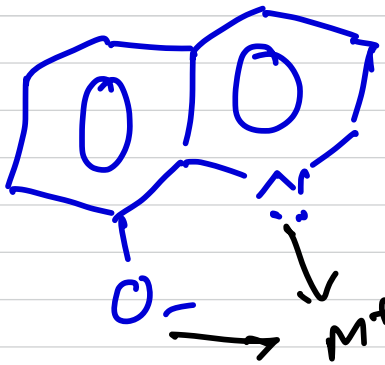
triethylene tetramine

NTA^{3-} = tetra
(nitrilo triacetate)

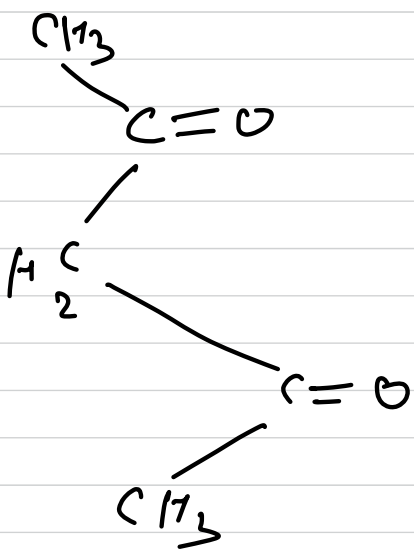
dmg^{-1}



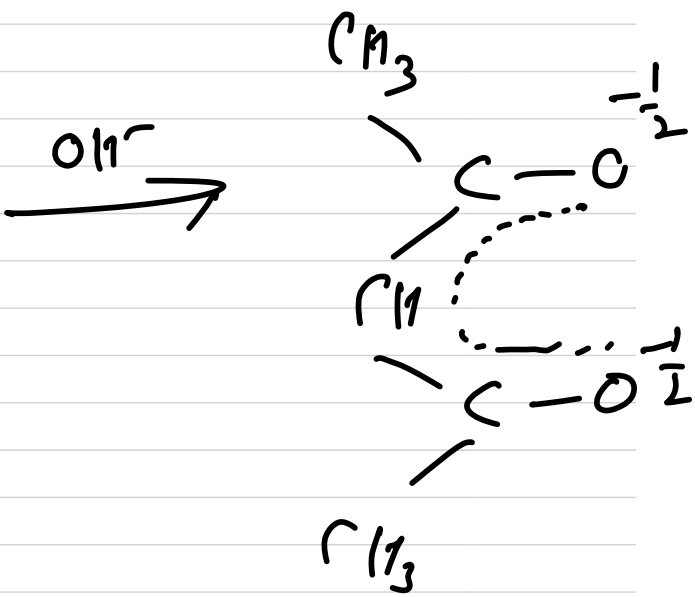




oxine^{-1}

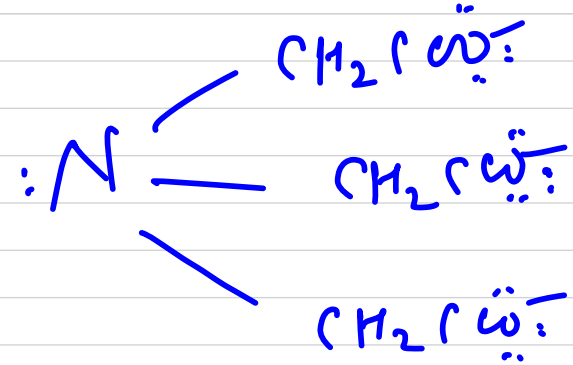


acetyl acetone

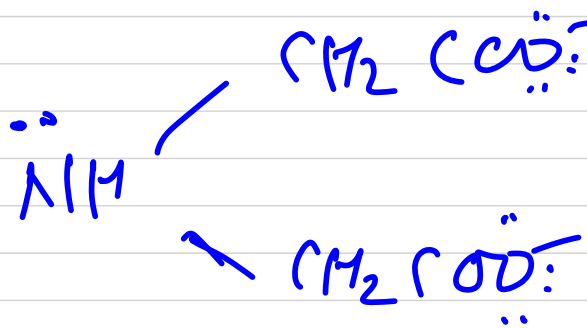


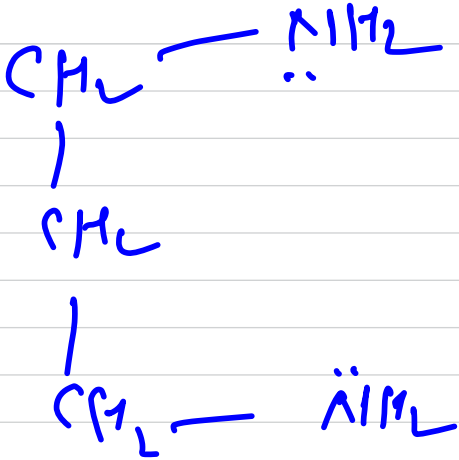
acac^{-1}

acetyl acetonate ion



(Nitrilo triacetate)

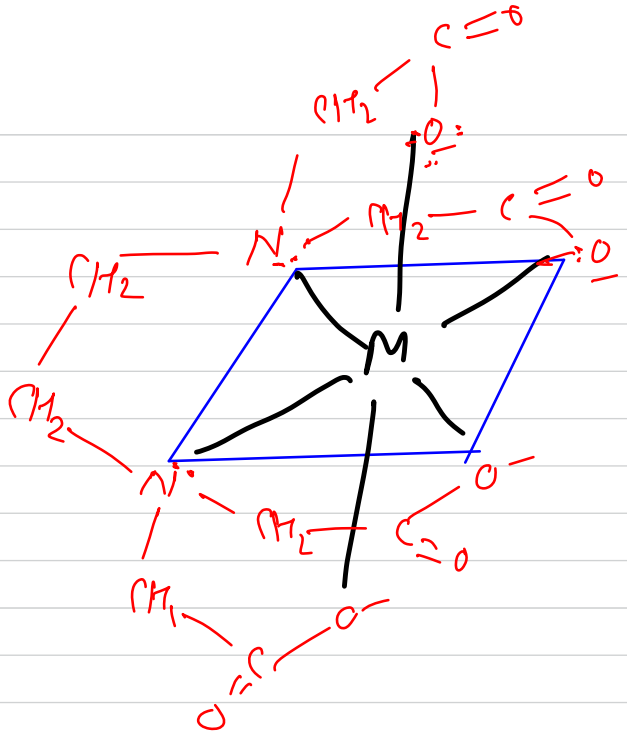




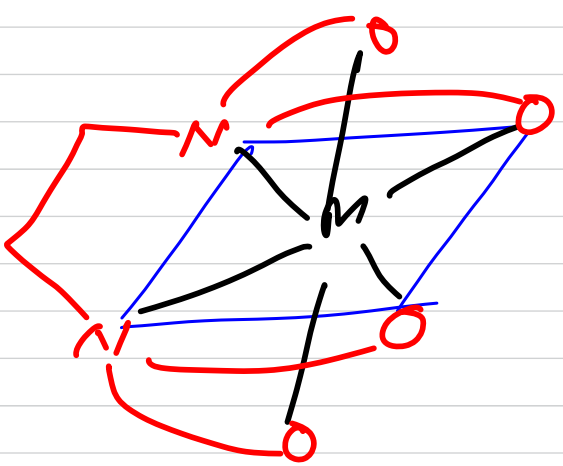
(AA)

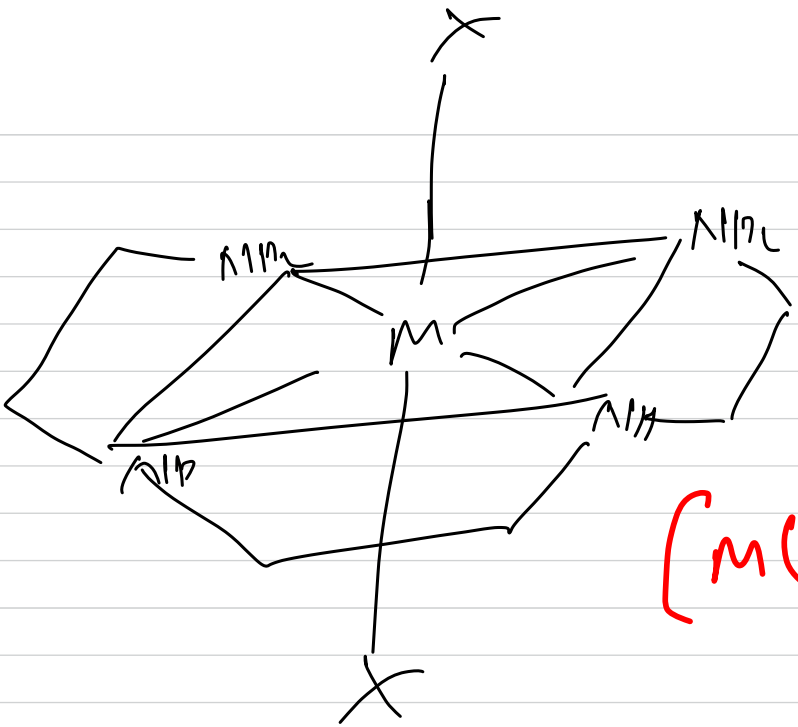
tn (trimethylenediamine)

(bidented)



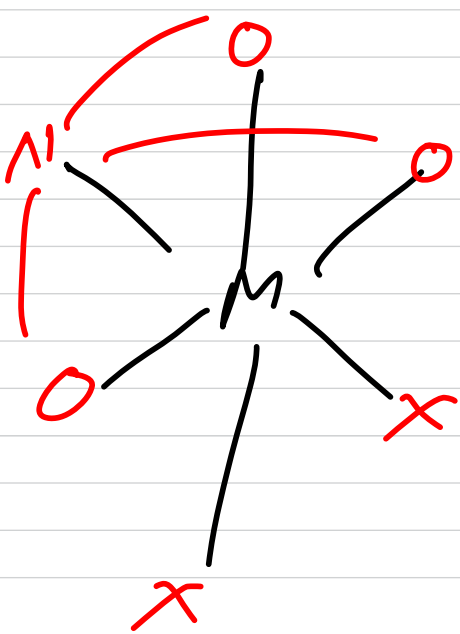
Total 5 number Rg = 5





$[M(\text{hem})\ x_1]$

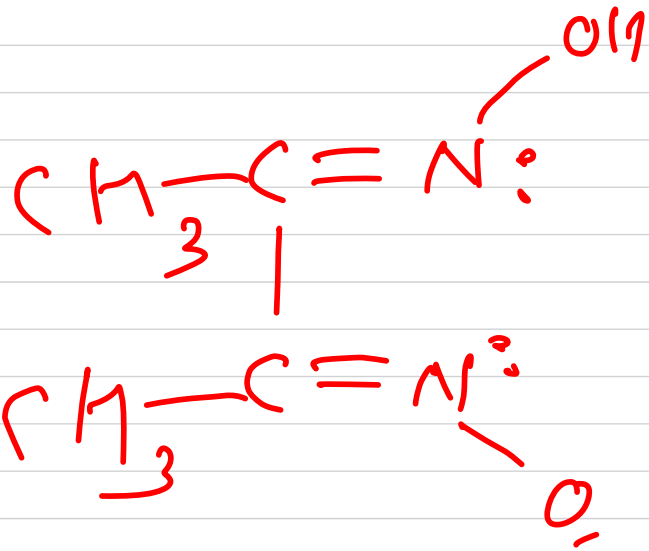
$[M(n+a)\ x_2]$



$n+a^3$

Dmg^{-1}

dimethyl glyoximate



(bidented)

Allotropes of Sn

+

(Ex-1 All)

+

(Paper discussion)