## (21/2 Hours)

(272 Hours)	
V.R. ZIX	IIotal Marks
V. B.: (1) All questions are compulsory. (2) Figures to the article of the state of	
(2) Figures to the right:	
(2) Figures to the right indicate full marks.	
(a) Attempt any two of the following:-	
(i) P. day wo of the following -	
Explain the mechanisms of i-	
(i) Explain the mechanisms of isomerisation reactions is the complexes.  (ii) What is trans effect 2 F	
(ii) What is trans effect? Explain pi-bonding theory wit (iii) How does racemisation reaction and the substitution reaction in square planar complexes.	vuordinate
Substinut - Explain ni-hand:	
substitution reaction in square planar complexes.  (iii) How does racemisation reaction take place in co-ordinate  (iv) Write a note on Marcha the	h respect to
Tile does racemisation reaction take -1	
Thustrate with an example take place in co-ordinate	Complete
(iv) Write a note on Marcus theory in outer sphere reactions.  (i) Explain the 1:	THE CASE
(b) Attempt any one of the following:—	SERVICE PROPERTY OF THE DESCRIPTION OF THE PROPERTY OF THE PRO
(i) Explain the ligand -1	
(i) Explain the ligand substitution reactions in the complex [F]  PPh, ligand.  (ii) With respect to square plane.	
(ii) With	e Br. Tby a
(1) respect to square planar complexes	
(ii) With respect to square planar complexes, describe the following (2) Nature of the solvent	1g factors
(2) Nature of the leaving ligand.	4
(a) Attempt and	
TALLE OIL	机工作的
one important application of metal-alkyne complex  (ii) How is ferrocene prepared by using med	White the
(ii) How is ferrocene prepared by using cyclopentadienyl Grignard  Write the following chemical reactions of ferrocene  (1) Sulphonation	action and 4
Write the following chemical reactions of ferrocene:  (1) Sulphonation  (2) Acylatics	学次维 动性
Charles of factions of faction	freagent? 4
(2) Acylation.	
On the basis of Valence Road The	
in dibenzene chrominm (0)	
(iii) On the basis of Valence Bond Theory, explain the structure and (iv) Describe the preparation of Z	u ponding 4
it's salient c.	型,1967年
(iv) Describe the preparation of Zeise's salt. Draw the structure and it's salient features.  (b) Attempt any one of the following:  (i) Give one method - c	d explain 4
(i) Give one method of synthesis of diallyl nickel complex. Draw an  (ii) Explain the half sandwish	即以来上于一位于
the structure of synthesis of dially nickel come	Arriver services and
(ii) Evolution of it.	d explain
Capitalli the half sandwich complex with	
(ii) Explain the half sandwich complex with an example.	
TO A TOTAL WILLIAM AND A STATE OF THE STATE	4
with a suitable example. Give merits and demerits of inorganic in (ii) What are the possible structures shown by	於唐佛院教
(ii) What are the possible. Give merits and demerits of	laterials 4
compounds 2 Discours structures shown by AD	
(ii) What are the possible structures shown by AB <sub>2</sub> type of incompounds? Discuss the structure of calcium fluoride molecul	organio A
outclust ituoride molecul	e. 1

(iii) On the basis of band theory, explain the electrical conductivity of	alkali 4
and alkaline earth metals.  (iv) Define the term "nanoparticles". How will you prepare nanopartic	les by 4
(iv) Define the term "nanoparticles". How will you particles . How will also the second secon	
Langmuir Blodgett method?	
(b) Attempt any one of the following:	uniber 4
Gi) Explain the parabolic relationship between energy (E) and	
ves c c - Instead in light of DATIO UISULY.	11. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
an a supplied the negation of interpretation of interpretation of interpretation	thad 9
with one suitable example. What are the disadvantages of this me	IIIOa i
(a) Attempt any two of the following:-	
(a) Attempt any two of the following:  (i) Explain Job's method for the determination of stepwise formation co	instant 4
0 1112	
on mi alastrania enectra exhibited by INI (HaU), Toumpton	x ion. 4
(iii) With reference to Infra - Red spectroscopy, describe the nature of me	etal S 4
(iii) With reference to mira - Red spectroscopy, determined	
bond using two examples.  (iv) Write a note on the nature of metal - oxygen bond with reference to I	Raman 4
spectroscopy.	
(b) Attempt any one of the following:	4
(i) Explain the structure of CuSiP <sub>6</sub> . 6H <sub>2</sub> O by ESR spectroscopy.	A1 O 4
(ii) Discuss the electronic spectra exhibited in the compound	711203
containing Cr+3 ion as an impurity.	
Attempt any four of the following:	mplex, 12
(a) Explain the two factors (i) charge of complex (ii) geometry of con-	ipiex, 12
. Continue the mote of reaction	
(b) Give the mechanism of ligand substitution reaction of octanedral com	peixes
the authorizing of metal ligand bond.	
(c) What is sixteen electron rule? On the basis of electron count show w	hether
following complexes obey this rule:-	
(i) [Ir Br <sub>2</sub> (CH <sub>3</sub> ) (CO) PPh <sub>3</sub> ]	
$C: (N_1 \cap N_2 \cap C \cap M_1)$	
(d) Explain the structure of bis (tripheny phosphine) diphenylacetylene Pl	atinum
(0) complex.  (e) Discuss the k space with reference to band theory.	
(f) Explain the principle of coprecipitation method for the preparate	tion of
(1) Explain the principle of coprosipitation and	
nanoparticles.	rganic
(g) Give the three important applications of ESR spectroscopy in inc	11.5 kg (12. 12.
-la amaintest	tal - N
(h) With the principle of Raman spectroscopy, discuss the nature of me	**************************************
bond in a complex.	eg enegrate julius. Suudus saata
	1.7.3.