SEMESTER 1 EXAMINATION
CHEMISTRY (862A)
PAPER-1
(THEORY)

Maximum Marks: 70

ALL QUESTIONS ARE COMPULSORY

Each question / subpart of a question carries one mark.

ANSWER KEY

Question 1		
(c)	6	
Question 2		
(c)	Henry's Law	
Question 3		
(b)	Cations move towards copper electrode	
Question 4		
(a)	Cuprous sulphide (Cu_2S)	
Question 5		
(a)	-1 and +5	
Question 6		
(a)	Ethyl isocyanide	
Question 7		
(d)	2,4,6 tribromophenol	
Question 8		
(b)	4:2:1	
Question 9		
(d)	1 coulomb	
Question 10		
(c)	A-B attraction force remains the same as A-A and B-B	
Question 11		
(c)	Carbon monoxide	

Question 12		
(c)	$Cu(NO_3)_2 + NO_2 + H_2O$	
Question 13		
(d)	**Methanol**	
Question 14		
(b)	KYO_3	
Question 15		
(d)	**Ethyl alcohol**	
Question 16		
(b)	**349 g mol^{-1}**	
Question 17		
(b)	**1·08 V**	
Question 18		
(d)	**Ethyl acetate and ethyl chloride**	
Question 19		
(d)	**3,2,1**	
Question 20		
(a)	**Nature of solvent.**	
Question 21		
(c)	**But-2-ene**	
Question 22		
(c)	**Benzene**	
Question 23		
(d)	**F-centres**	
Question 24		
(b)	**279·0 ohm^{-1}cm^{2}mol^{-1}**	
Question 25		
(c)	**Ethoxy ethane**	
Question 26		
(i)		
	(c)	**Refining**
(ii)		
	(b)	**Smelting**

Question 27			
(i)			
	(c)	Wurtz reaction	
(ii)			
	(a)	tert-butyl chloride	
Question 28			
(i)			
	(d)	Chalcopyrite	
(ii)			
	(c)	$Cu_2S + 2Cu_2O \longrightarrow 6Cu + SO_2$	
Question 29			
(i)			
	(a)	Phenol	
(ii)			
	(b)	Dow's process	
Question 30			
(i)			
	(b)	Square pyramidal	
(ii)			
	(c)	sp^3d^2	
Question 31			
(i)			
	(b)	C_2H_5Br	
(ii)			
	(d)	$C_2H_5OC_2H_5$	
Question 32			
(i)			
	(d)	$Na[Ag(CN)_2]$ and Na_2S	
(ii)			
	(c)	Mac-Arthur-Forrest cyanide process	
Question 33			
(i)			
	(d)	Bromomethane, silver bromide and carbon dioxide	

(ii)				
	(c)	**Hunsdiecker reaction**		
Question 34				
(i)				
	(b)	**sp^3d^2**		
(ii)				
	(b)	**Square pyramidal**		
Question 35				
(i)				
	(c)	**Neutral $FeCl_3$**		
(ii)				
	(d)	**Violet**		
Question 36				
(i)				
	(b)	**Tailing of mercury**		
(ii)				
	(b)	**White coloured lead sulphate**		
Question 37				
(i)				
	(b)	**Face centred cubic**		
(ii)				
	(c)	**141·4 pm**		
Question 38				
(i)				
	(d)	**5·16 atm**		
(ii)				
	(b)	**0·21 M**		
Question 39				
(i)				
	(c)	**$1·16 \times 10^{-2}$ Ω^{-1} cm^{-1}**		
(ii)				
	(a)	**232·20 Ω^{-1} cm^2 mol^{-1}**		
Question 40				
(i)				
	(a)	**405·8 pm**		

(ii)				
	(c)	10·72 g/cm³		
Question 41				
(i)				
	(b)	270·768 K		
(ii)				
	(a)	1·20 m		
Question 42				
(i)				
	(b)	+0·89V		
(ii)				
	(b)	-515·3 kJ		
Question 43				
(i)				
	(b)	330·56 pm		
(ii)				
	(c)	143 pm		
Question 44				
(i)				
	(c)	4·190 mm Hg		
(ii)				
	(b)	0·0826		
Question 45				
(i)				
	(b)	0·024 M		
(ii)				
	(a)	241·67 S cm²/mol		

Question 46		
(d)	Assertion is false but reason is true.	
Question 47		
(a)	Both assertion and reason are true and reason is the correct explanation of the assertion.	

Question 48		
(a)	**Both assertion and reason are true and reason is the correct explanation of the assertion.**	
Question 49		
(c)	**Assertion is true but reason is false.**	
Question 50		
(c)	**Assertion is true but reason is false.**	