


SCHEME OF VALUATION

(Scoring Indicators)

Revision: 2015		Course code: TED (15)-2004		
Course Title: ENGINEERING CHEMISTRY-II				
Qst. No.	Scoring Indicator	Split up score	Sub total	Total
<u>PART A</u>				
I(1.)	Statement of Pauli's exclusion principle	2	2	
(2.)	Definition of corrosion	2	2	
(3.)	Definition of Galvanic cell Any one example	1 1	2	
(4.)	Definition of functional groups	2	2	
(5.)	Definition of Calorific value	2	2	5×2=10
<u>PART-B</u>				
II(1.a)	Any four difference between orbit and orbital	4	4	6
(1.b)	Principle quantum number, azimuthal quantum number, magnetic quantum number, spin quantum number	2	2	
(2.a)	Labelled diagram for electroplating of nickel over steel spoon Electrode reaction	2 2	4	6
(2.b)	Any two conditions for corrosion	2	2	
(3.a)	(i) -NH ₂ (ii) -COOR (iii) -COOH (iv) -CHO	1 1 1 1	4	

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(3.b)	Vulcanization is the process of heating raw rubber with Sulphur at 373-415K	2	2	6
(4.a)	Four regions of atmosphere Explanation	2 2	4	6
(4.b)	Nuclear fuels explanation Two examples	1 1	2	
(5.a)	Any two merits Any two demerits	2 2	4	6
(5.b)	Shape of P _x , P _y and P _z orbits	2	2	
(6.a)	Any two difference of anodizing and electroplating	4	4	6
(6.b)	Cathodic protection explanation	2	2	
(7.a)	(i) Phenol and formaldehyde Any one use (ii) Caprolactum Any one use	1 1 1 1	4	
(7.b)	Borosilicate glass explanation	2	2	6
<u>PART-C</u>				
III(a)	Statement of Hund's rule of maximum multiplicity Electronic configuration of nitrogen Electronic configuration of neon	2 2 2	6	6
(b)	Electronic configuration of potassium Write all four quantum number present in outermost shell of potassium	2 4	6	6
(c)	Any four postulates of Bohr's atom theory	4	4	4

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IV (a)	Explanation of coordinate bonding	2	6	6
	Any one example of coordinate bonding	1		
	Explanation of hydrogen bonding	2		
	Any one example of hydrogen bonding	1		
(b)	Statement of Heisenberg's uncertainty principle	2	5	5
	Mathematical expression	2		
	Explanation of terms	1		
(c)	Illustration of ionic bond formation	2	4	4
	Two examples	2		
V (a)	Construction of H ₂ -O ₂ fuel cell with diagram	3	6	6
	Cell reactions	3		
(b)	Definitions of electrolysis	2	5	5
	Any three applications of electrolysis	3		
(c)	Any four factors affecting rusting	4	4	4
VI (a)	Any four difference between metallic and electrolytic conductors	4	6	6
	Any two examples for metallic and electrolytic conductors	2		
(b)	Definition of electrochemical series	2	5	5
	Any three applications of electrochemical series	3		
(c)	Explanation of rusting	2	4	4
	Mechanism	2		
VII (a)	Definition of refractories	2	6	6
	Classification of refractories: Acidic, Basic and Neutral	3		
	Examples for each	1		
(b)	Definition of addition polymerization with example	2.5		

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	Definition of condensation polymerization with example	2.5	5	5
(c)	Any four difference	4	4	4
VIII(a)	Four classifications			
	i. Elastomers	1		
	ii. Fibers	1		
	iii. Thermoplastics	1		
	iv. Thermosetting plastics	1	4	
	Examples for each	2	2	6
(b)	i. Catenation capacity	1		
	ii. Tetravalency	1		
	iii. Strength of C-C bond	1		
	iv. Multiple bond formation	1		
	v. Isomerism	1	5	5
(c)	Any four advantages of optical fibers	4	4	4
IX (a)	Definition of cracking	2		
	Any four difference between thermal cracking and catalytic cracking	4	6	6
(b)	Green house effect definition	2		
	Any three consequences	3	5	5
(c)	Any four principles of green chemistry	4	4	4
X (a)	Definition of fuel	2		
	Classification	3		
	Explanation with two examples for each	1	6	6
(b)	Definition of water pollution	2		
	Any four major water pollutants	3	5	5
(c)	Any four difference between classical smog and photochemical smog	4	4	4

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