Govt polytechnic Jhajjar

Name of faculty- Ms Anita

Branch - Civil, Ceramic and mechanical(1st and 2nd semester)

Subject- Applied Chemistry

Lesson plan duration- 16 weeks

work load (lecture /practical)(in hours): Lecture-03, Practical-04

Theory Practical

week

Lecture day Topic (Including assignment and tests) Day Name of Experiment

		worl	k load (lecture /p	oractical)(in	hours) : Le	ecture-03, Practica	-04		
week		Theory			,	Practical	Practical		
	Lecture day	Topic (Includi	ing assignment a nn ann uenvano		gii e s	Day	Name of Expe	riment	
1st	1	equation							
	2	Heisenberg's uncertainity principal, modern concept of atomic strurure Definition or ordina, snapes or s.p. and or ordinars, quantum number and their significance Description Cominguiation, reduced as Principal, pagin's excitation				1&2	Exp 1:To prepare standard solution of oxalic acid		
	3								
ŀ	4	theory and hund's rule EXECUTION COMMISSION AND ADDRESS UP TO ADDRESS U				3&4	Exp 2:To dilute the given solution of KMnO4		
2nd	5								
	6								
	7	Classification of elements i metals and metalloids	in to s,p, d and f	blocks, me	tals ,non				
3nd	8	Chemical bonding, cause of and mettalic bond, electro		bond,cova	lent bond	5&6	Practice of exp r	Practice of exp no.'s 1&2	
	9	ionic ,covalent and mettal		•	•				
	10	revision of unit 1				7&8		Exp 3: To find the strength in gm/lt of given solution	
4nd	11	1st sessional test (unit 1) Unit 2: Mechanical properties of metals(conductivity, elasticity, stiffness, lusture, hardness, toughness. ductility, malleability, brittleness and impact resistance and their							
	12						of NaOH using N/10 standard oxalic acid solution		
-	13	uses Definition of mineral, ore, gangue, flux and slag Metallurgy of iron from haematite using blast furnace, commercial varieties of iron				•	Exp 4: To find out the total alka		
5nd	14					9&10	sample with the help of standard sulphuric acid solution		
	15								
	16	Alloys: definition, necessity of making alloys, composition , properties and uses of duralumin and steel Heat treatment of steel Unit:3 Arrhenius concept of acids and bases, strong and weak acids and bases, ph and its significance				11&12	Exp 5: To determine the total hardness of given sample of water by EDTA method		
6nd	17								
	18								
	19	Numerical problems related to ph Hard and soft water, causes and types of hardness of water Expression of hardness of water in ppm				13&14	Exp 6: To determine the amount of total dissolved solids (TDS) in ppm in given sample of water gravimetrically		
7nd	20								
	21								
	22	Disadvantages of using hard water in boilers				15&16	Practice of exp no's 3&4		
8nd	23	Sterlization of water by ion exchange method							
····	24	water sterlization by chlorine, UV radiation and Reverse							
011	25	osmosis				17&18	Exp7: To determine the ph of diffrent solutions us digital ph meter		
		2nd sessional test (unit 2&3) Unit -4: Definition of fuel, classification of fuel, higher and lower calorific value and units of calorific value characterstics of an ideal fuel, composition and refining of							
9th	26								
	27	petroleum							
	28	Composition, properties and uses of CNG,LPG,PNG and LNG Advantages of gaseous fuels over solid and liquid fuels. Scope of hydrogen as a fuel in future				19&20	Exp 8: Demonstrate how to calculate the calorific value of solid/liquid fuel using bomb calorimeter		
10th	29								
	30	Functions and qualities of good lubricants, classification of lubricants with examples							
	31	Physical properties of fubricants/oiliness, viscosity, viscosity index, flash and fire pt., ignition temp and pour point Unit 5: definition of polymers, classification, additional and condensation polymers Preparation, properties and uses of (polythene, PVC, Nylon-66 and Bakelite				21&22	Exp 9: To determine the viscosity of given lubricanting oil by using Redwood viscometer		
11th	32								
	33								
	34	Definition of plastics. Themoplastics and thermosetting polymers, natural rubbers neoprene and other rubbers definition of corrosion, dry and wet corrosion, factors affecting rate of corrosion Hot dipping, metal cladding, cementing, quenching and				23&24	Exp 10: To prepare a sample of phenol-formaldehy resin(bakellite)		
12th	35								
	36								
13th	37	cathodic protection Definitio of nanotechnology and its applications				25&26	Practice of Exp no's 5&6		
	38	3rd sessional test (unit 4&5)							
	39						Tractice of Exp 1	Practice of exp no \$ 5&6	
		revision of unit 1				27&28			
ŀ	40	revision of unit 3					Practice of Exp no's 7and 9		
14th	41								
	42	revision of unit4							
	43	revidion of unit 5				29&30			
15th	44	Quiz of unit 1&2					practice of final	practice of final practical	
[45	Quiz of unit 3,4 & 5							
	46	full syllabus revision					viva - voce		
16th	47	test of full syllabus				31&32			
ŀ	48	Quiz of full syllabus							
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