## MOHAMMED SATHAK A J COLLEGE OF ENGINEERING

Siruseri IT Park, OMR, Chennai - 603103

			LESSON PL	AN								
		Departmen	nt of Electrical and E	lectronics	Engineeri	ing						
Na	me of the Subject	Total Quality Management	Na: handling	Name of the handling Faculty C.Archana								
Subj	ject Code	GE 8077		Y	ear / Sem	/ Sem IV/VIII						
A	cad Year	2022-2023		Batch 2019-2023								
			Course Object	ctive								
To facil	itate the un	derstanding of Quality Management principle	les and process									
			Course Outc	omo								
o unders	tand the fra	ume work of Total Quality Management emp			and Custom	ners						
o unders	tand the T(	QM principles with reference to qualities of I	Leadership, Involvement	and Team	work for the	continuo	ous process improven	nent				
		oply the conventional and new management										
		ools of Performance measures for the impler										
		ed for quality regulatory system and its docu		•								
			Lesson Plan	n								
			T / R*									
Sl. No.		Topic(s)	Book	Periods Required		Teaching / NPTEL / !/ etc )	Blooms Level (L1 L6)	со	РО			
			UNIT I - INTROD	UCTION	<u> </u> N							
1	Introducti	ion - Need for quality	Т1	1	В	В	L2	CO1	PO1-PO12			
2	Evolution	of quality - Definitions of quality	Т1	1	В	В	L2	CO1	PO1-PO12			
3	Dimensio	ns of product and service quality	R2	2	В	В	L2	CO1	PO1-PO12			
4	Basic con	cepts of TQM	<b>T</b> 1	1	B	В	L2	CO1	PO1-PO12			
5	TQM Fra	mework, Contributions of Deming	R2	2	B	В	L2	CO1	PO1-PO12			
6	Contribut	ion of Juran and Crosby	R2	2	В	В	L2	CO1	PO1-PO12			
7	Barriers to	o TQM	T1	1	В	В	L2	CO1	PO1-PO12			
8	Quality st	tatements - Customer focus	R2	1	В	В	L2	CO1	PO1-PO12			
9	Customer	orientation, Customer satisfaction	R2	1	1 BB		L2	CO1	PO1-PO12			
10	Customer	complaints, Customer retention	R2	1	B	В	L2	CO1	PO1-PO12			
uggested	d Activity:	Assignment										
valuatio	on method:	Assignments on Customer Satisfaction and 0	Quality									
NIT II	I - TQM	PRINCIPLES										
11	Leadershi	p – Quality Statements	T1	1	В	В	L2	CO2	PO1-PO12			
12	Strategic	Quality Planning - Quality Councils	Т1	1	B	В	L3	CO2	PO1-PO12			
13	Employee	e involvement	R1	1	В	В	L2	CO2	PO1-PO12			
14	Motivatio	on, Empowerment	R1	2	B	В	L3	CO2	PO1-PO12			
	1		1	1	1		I	_1				

15	Team and Teamwork, Recognition and Reward	Т1	2	ВВ	L3	CO2	PO1-PO12
16	Performance appraisal	T1	1	BB	L3	CO2	PO1-PO12
17	Continuous Process Improvement	Т1	1	BB	L3	CO2	PO1-PO12
18	PDCA cycle	R2	1	BB	L3	CO2	PO1-PO12
19	5S, Kaizen	R2	2	BB	L3	CO2	PO1-PO12
20	Supplier partnership – Partnering, Supplier selection, Supplier Rating.	R2	2	ВВ	L3	CO2	PO1-PO12

Suggested Activity: Quiz

Evaluation method : Quiz on Leadership

## UNIT III - TQM TOOLS AND TECHNIQUES - I

21	The Seven Traditional Tools Of Quality	R1	2	ВВ	L3	CO3	PO1-PO12
22	New Management Tools	R1	2	ВВ	L3	CO3	PO1-PO12
23	Six Sigma: Concepts & Methodology	R1	1	ВВ	L3	CO3	PO1-PO12
24	Six Sigma : Applications To Manufacturing, Service Sector Including IT	T1	2	ВВ	L3	CO3	PO1-PO12
25	Bench Marking - Reason To Bench Mark	T1	1	BB	L3	CO3	PO1-PO12
26	Bench Marking Process	T1	1	ВВ	L3	CO3	PO1-PO12
27	FMEA – Stages, Types.	R1	2	ВВ	L3	CO3	PO1-PO12

Suggested Activity: Assignment

Evaluation method: Assignment on Benchmarking

## UNIT IV - TQM TOOLS AND TECHNIQUES - II

28	Quality Circles	T1	1	BB	L2	CO4	PO1-PO12
29	Cost of Quality	Т1	1	BB	L2	CO4	PO1-PO12
30	Quality Function Deployment (QFD)	Т1	2	BB	L3	CO4	PO1-PO12
31	Taguchi Quality loss function	R1	1	BB	L2	CO4	PO1-PO12
32	TPM - Concepts	R1	1	BB	L2	CO4	PO1-PO12
33	Improvement needs	R1	1	BB	L2	CO4	PO1-PO12
34	Performance Measures	R1	1	ВВ	L3	CO4	PO1-PO12

Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any

Evaluati	on method : Assignm	nent on Cost of Quality										
JNIT	V - QUALITY M	ANAGEMENT S	YSTEM									
35	Introduction—Ber	nefits of ISO Registra	tion	7	Γ1	1	В	BB	1	L2	CO5	PO1-PO12
36	ISO 9000 Series o	f Standards		7	Γ1	1	В	BB	]	L2	CO5	PO1-PO12
37	Sector-Specific Sta	andards - AS 9100		7	Γ1	1	В	ВВ	]	L3	CO5	PO1-PO12
38	Sector-Specific Sta	andards- TS16949		7	Γ1	1	В	ВВ	]	L3	CO5	PO1-PO12
39	Sector-Specific Sta	andards- TL 9000	s- TL 9000 T1 1 BB L3		L3	COS	PO1-PO12					
40	ISO 9001- Requirements—Implementate Documentation—Internal Audits— Registration		tion	7	Γ1	2	В	ВВ	1	L3	CO5	PO1-PO12
41	Introduction - Environmental Managem System		nent	7	Γ1	1	В	вВ	1	L <b>2</b>	CO5	PO1-PO12
42	ISO 14000 Series Requirements of IS	s &	7	Γ1	2	В	ВВ		L <b>3</b>	CO5	PO1-PO12	
43	Benefits of EMS			7	Γ1	1	В	ВВ	1	L <b>2</b>	COS	PO1-PO12
	Beyond the Syllabus											
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2	1	etencies & Quality mai	ntain		T. 4 P. 1							
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				NIQUES	0	5							
	Unit 4 TQM TOOLS AND TECHNIQUES I						2	0	0	0	7	0	7
Unit 5 QUALITY MANAGEMENT SYSTEM						4	5	0	0	0	9	0	9
	To	otal			0	21	22	0	0	0	43	0	43
•	Total Pe	ercentag	e		0	49	51	0	0	0	100	0	100
					CO	O PO Mapp	ing	T	1		T		
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
			1	1	2	1	2	2	1	2	2	1	
				2	2	1	2	3	2	2	2		1
1	2	2	1	3	1		1	2	1	3	1		
1	2	3	2	2			1			1	1	1	1
	1			2	2	1	1	1	1	1	2		
0.4	1	1	0.8	2		0.6					1.6		0.4
					Justification	on for CO-P	O mappin	g	·				
gh corre	lation for I	PO1-P12 is	given as t	he CO1 can	be used to ap	pply in Mana	aging, Iden	tify , formu	ılate and pı	ovide solu	tions		
gh corre	lation for I	P01-P12 is	given as th	ne CO2 can b	e used to ap	oply in Plann	ing, Identif	y , formula	ate and pro	vide solutio	ons		
gh corre	lation for I	P01-P12 is	given as th	ne CO3 can b	e used to ap	ply in organ	izing, Iden	tify , formu	ılate and pr	ovide solu	tions		
gh corre	lation for I	P01-P12 is	given as th	ne CO4 can b	e used to ap	ply in Direc	ting, Identi	fy , formul	ate and pro	vide soluti	ons		
gh corre	lation for I	P01-P12 is	given as th	ne CO5 can b	e used to ap	ply Controll	ing, Identif	y , formula	ate and pro	vide solutio	ons		
3 High level 2		High level		2	2	Moderate level			<b>1</b> I			Low leve	el
i;	PO1  1  1  0.4  gh corregh corregh corregh corre	Total Per PO1 PO2  1 2 1 2 1 0.4 1  gh correlation for ligh correlation for light correlation for	PO1 PO2 PO3  1 2 2 1 2 3 1 0.4 1 1  O.4 1 1  gh correlation for PO1-P12 is gh correlation for P01-P12 is	PO1 PO2 PO3 PO4  1 1  1 2 2 1  1 2 3 2  1 0.4 1 1 0.8  gh correlation for PO1-P12 is given as the gh correlation for PO1-P12 is given giv	Total Percentage  PO1 PO2 PO3 PO4 PO5  1 1  2 2  1 2 2 1 3  1 2 3 2 2  1 0.4 1 1 0.8 2  gh correlation for PO1-P12 is given as the CO1 can be generally greater as the CO2 can be generally greater as the CO3 can be generally greater as the CO4 can be generally greater as the CO5 can be greater as t	Total Percentage  CO PO1 PO2 PO3 PO4 PO5 PO6  1 1 1 2 2 2 1 2 1 3 1 1 2 2 2 1 3 1 1 2 3 2 2 1 1 0.8 2  Justification for PO1-P12 is given as the CO1 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO3 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used to apply correlation for PO1-P12 is given as the CO5 can be used	Total Percentage  CO PO Mapp PO1 PO2 PO3 PO4 PO5 PO6 PO7  1 1 2 1  1 2 2 1  1 2 2 1  1 2 2 1  1 0.4 1 1 0.8 2 0.6  Justification for CO-P  gh correlation for PO1-P12 is given as the CO2 can be used to apply in Plann gh correlation for PO1-P12 is given as the CO3 can be used to apply in organ gh correlation for PO1-P12 is given as the CO4 can be used to apply in Direct gh correlation for PO1-P12 is given as the CO4 can be used to apply in Direct gh correlation for PO1-P12 is given as the CO5 can be used to apply in Direct gh correlation for PO1-P12 is given as the CO5 can be used to apply in Direct gh correlation for PO1-P12 is given as the CO5 can be used to apply controlled.	Total Percentage  CO PO Mapping  PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8  1 1 1 2 1 2  1 2 2 1 3 1 1  1 2 3 2 2 1 1  1 1 2 3 2 2 1 1  1 1 2 3 2 2 1 1  1 1 2 3 1 1  1 1 2 3 1 1  1 1 2 3 1 1  1 1 2 3 1 1 1  1 1 2 3 1 1  1 1 2 3 1 1  1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1	Total Percentage 0 49 51 0  CO PO Mapping  PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9  1 1 1 2 1 2 2  1 2 3 1 2 3  1 2 2 1 2 3  1 2 3 2 2 1 1  1 2 3 1 2  1 0.4 1 1 0.8 2 0.6  Justification for CO-PO mapping  gh correlation for PO1-P12 is given as the CO2 can be used to apply in Planning, Identify, formula gh correlation for PO1-P12 is given as the CO3 can be used to apply in organizing, Identify, formula gh correlation for PO1-P12 is given as the CO3 can be used to apply in Directing, Identify, formula gh correlation for PO1-P12 is given as the CO4 can be used to apply in Directing, Identify, formula gh correlation for PO1-P12 is given as the CO4 can be used to apply in Directing, Identify, formula gh correlation for PO1-P12 is given as the CO4 can be used to apply in Directing, Identify, formula gh correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply Controlling, Identify, formula correlation for PO1-P12 is given as the CO5 can be used to apply CO1-P12 is given as the C	Total Percentage 0 49 51 0 0  CO PO Mapping  PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10  1 1 1 2 1 2 2 1  1 2 2 1 2 3 2  1 2 3 2  1 1 2 3 1 2 1  1 2 3 1 1 1 1 1  1 2 1 1 1 1 1  1 2 1 1 1 1 1	Total Percentage 0 49 51 0 0 0  CO PO Mapping  PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11  1 1 2 1 2 2 1 2  1 2 2 1 2  1 2 2 1 3  1 2 2 1 3  1 2 2 1 3  1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total Percentage	Total Percentage

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