	Summer		Life-Cycle Cost Analysis			The state of the s		
2	Example Q1)		To assume the life cycle costs of the following types of lift to an offi			1 Drestone tha	T the maintanance	
	G(1)	٧	whose life is 40 years. The rate of interest allowed is 4% is compound. (ii)	per annum		Cost	& replacement	
	(A)	-	Lift A will cost \$1,200,000, will require a maintainence cost of \$50,000 every year and require to replace the lifting motor, strend and control panel after 20 years at a cost of \$800,000		(pressure that the maintenance cost & replacement cost are charged at the end of lawnyear)			
		1	life-cycle costs of Lift A	\$		17	lachyear)	
	,	11	initial cost	1,200,000		and the second s		
		2 !	Present value of maintance cost at 4% for 40 years:	4		I show the	te 13 companded per month	
			= \$50,000 × [(1 + 0.04) ⁴⁶ - 1] / [0.04 × (1+ 0.04) ⁴⁰]	989,639	-	Propert value of	te is companded per month "n" will be no. of with natural \$1 payable at & year,	
			Replacement of lift motor, strand and control panel after 20 years:		regular intervals: [(1+1)^0-1]/[i(1+i)^0]			
		12	= \$800,000 / (1+0.04)20	365,110				
			Total life-cycle cost at present value for Lift A:	_				
	(B)	1	Lift B will cost \$1,700,000, will require a maintainence con every year and require to replace the lifting motor, strand panel after 25 years at a cost of \$600,000	et of \$30,000 and control	Present value of \$1: 1/(1+i) ⁿ	* Canoider the TPI i'll use old-day		
			Life-cycle costs of Lift B	s		data.		
		1	Initial cost	1,700,000				
		2	Present value of maintance cost at 4% for 40 years:	Present value regular interv	e of \$1 payable at vals:			
			= $$30,000 \times [(1 + 0.04)^{40} - 1] / [0.04 \times (1 + 0.04)^{40}]$	[(1+i) ⁿ -1]/[i	(1+i) ⁿ]			
		3	Replacement of lift motor, strand and control panel after 25 years:					
			= \$600,000 / (1+ 0.04) ²⁵	225,070	•	Present value of \$1: 1/(1+i) ⁿ		
(nu	ululo	W.	Total life-cycle cost at present value for Lift B:	2.518.853]	
Con	-Verdici	al:	Lift B is more economic than Lift A	PORT NET TORING AND TO		m controllers and an alternative of the controllers and the contro	Lessen and the Description of the second	
g _a z lede st l edensk	Q2)	10/01/46	What if the interest rate change to 5%?	nterest	ra	te may Al	cc analysis.	
í			Life-cycle costs of Lift A	\$		the I	· CC amelysis.	
(Initial cost	1,200,000	10.05	tt naughlo at		
•			Present value of maintance cost at 5% for 40 years.	regular inte				
			= $$50,000 \times [(1 + 0.05)^{40} - 1] / [0.05 \times (1 + 0.05)^{40}]$	[(1+i) ⁿ -1]/	i(1+i)"]		
		3	Replacement of lift motor, strand and control panel after 20 years;		l Dua			
			= \$800,000 / (1+ 0.05) ²⁰	301,512		sent value of \$1: 1+i) ⁿ		
			Total life-cycle cost at present value for Lift A:	2.359.466	L			
			,					
			Life-cycle costs of Lift B	\$		Present value of \$1 p	pavable at	
		-	Initial cost	1,700,000		regular intervals:		
		2	Present value of maintance cost at 5% for 40 years:	644 770		[(1+i) ⁿ -1]/[i(1+i) ⁿ]		
		S=*	= \$30,000 x [(1 + 0.05) ⁴⁰ - 1] / [0.05 x (1+ 0.05) ⁴⁰]	514,773				
		3	Replacement of lift motor, strand and control panel after 25 years;			resent value of \$1:		
			= \$600,000 / (1+ 0.05) ²⁶	177,182	1/(1+l) ⁿ			
			Total life-cycle cost at present value for Lift B:	2,391,954	-			
	Verdic	ct:	Lift A is more economic than Lift B					