					, a		
	Name: Keerti P. Charantimath  Koll No.: 19MA 20059  Page No.  Date						
Jane	1.34	EOE Oksignum	ent: Capitai	Bu	geting		The second
Q1)	12 10	Tarillani.	LEW W. W.		ind other	15-115	101 102
۵.	Paybo	aca Period =	Initial in	restm	ent y	lass	1
		*	Ahrual Cas	in f	lows.		
	: Pay	back Period =	100000 =	2.	55 year	4	The state of the s
		9	35027	-			
	:. Pay	back Period	for project	22	is 2	,855 ye	rais
		137700	out and	. 4.3		100	<u> </u>
					* 8	PEAL	3
Ь.	Discounted payback beind assuming a 10% cost of capital						
,	Year	Cash from	ws Present Va	lue	Discounte Cash from	Cas	nulative n flow
•	0 8	-100 000			-100 000		0000
		35017	0.909		28932.3	7 49.1	160.457
	2	35027					9228.155
	3	35027	0.757	Lis	2 6305.	V. 7	2,922.878
	Ч	35027	0.683			-4	1000.563
10.	They the property is secured it on 1887 & cast						
	Discounted payback period = 3+12922.878 = 3.54 years			3.54 years			
3	12192723923.444 15 VTU						
c)	DUSCOU	nted pays	ack period	ass	counted 16	1. 105	Capital
4	Sear	ash flows	resent Value	VIS	in flow	Cash	flow
	0 -	100000	1.00	-10	0000	-1000	
	9	35027	0 862		13.274	Con Lond	06.726
	2	35027	0.743		25.061		1.665
	3	35027	0.641		52.307	-2132	
	4.	31027	0.552	19 33	4.904	T. 1. 99	4.454

Even after 4 years, the investment is not recovered. So there is no year where investment is break-even.

Hence Discounted Payback Phiod kgs Page No.

Cannot be calculated, as investment Date.

is never recovered

d)	NPV at 10%. cost of capital and and
~/	14000
	The present value of annuity of \$ 1 for
	The present value of annuity of \$ 1 for 14 years # at 10% per annum interest is
1	3 1699
W. O. S.	
Yes all	The present value g 35027 = 35027 x 3 1699
e e	000., = 1100320873
F 129 3	
771 8	15 62 - 15 83 F 1 6 18 3 F 2 2 2 8 3 F 2 2 2 8 3 F 2 2 2 8 3 2 8 3 8 3 8 3 8 3 8 3 8 3 8 3
34 2 . 5 .	NPV= 117032 0873 - 100 000
	NPV =\$11032 . 0873
	Hence, the project is accepted at 10% cost of capital
Luse P	Biscounted bruback in water 3: 129 12 12 12 12
e)	NPV at 164. cost & capital
_	
- to a do	The present value of armeity of \$1 for a years
	at 16% per annum interest is 2.7982
	000 001 - 000 001 - 000 001 - 0
7.2	présent value of 35027 = 35027 x 2-7982
_	= 98012:55 11, 50028
153	1,008
1 1	1. NPV = 98012.5514 - 100,000
	NPV = -\$1987.4486
	DECEMBER AND AND FOR S = 3. "1 (23.3) 8 . A. , Vezus
	Hence, the project should be rejected at 161. out of capital
1 22 3 11 5	The control of the sound the property of the sound the sound of the so

ρ.	Profitability Index (PE) = Present Value of Cash Superus
	onital viitelta our
-	Considering the case of 10% xost of capital
	PI = 1111032.0873 = 1-110321
	100,000 10, 7745 21 115 1777 100 - 3
	The second of the
	Propitability Index at 10% cost of capital is 1.110321
**	Profitability Index at 10% cost of capital is [1.11032] Profitability Index at 10% cost of capital is [1.11032]
g.	considering the case of 16%. Lost of capital
	Pl = Present value of Cash Suploins Initial Suvestment
	Initial Investment
	= 98012.5514 = 0.98013
	1-1- (100000 - 5 392 201 State Bringhold 93/M
	· · · · · · · · · · · · · · · · · · ·
	Politability Index at 16.7 cost of capital is 10.980 13
Ster Lyan	PJ 21 hence proposal is rejected
	2. Q. L. L. D. J. L. K. J. M
h.	Enternal Rate of Reterrin CIRR) = X + Px-1 (Y-X)
	Dec tod TO = STOR Juniverson Par- Broad Ver
	where, Y= higher discourt rate,
	Biso CX 1250 lower 1 11 HAME 12 5 12 = 4 91M
	Px = Present value of cash inflows at X
	Ry = " " " " " " " " " " " " " " " " " "
10	In Initial Investment
	1RR = 10 + 111032.0873-100000 (16-10)
	111082.0873-98012.5514
	IRR = 10 + 5.084 09 = 15.087.
	MAIR EL ATT Internal return rate for the project is [15.084.]

MIRR (Modified Internal Late of Return) = NFV - 1

T

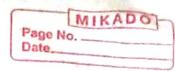
Where T = Initial investment and given kelinvestment me

n = number of years

We have reinvestment Rate = 07 and n=4

... MIRR = 4 35027x4 - 1 = ann 0 0 0879

1... MIRR = 8.791. When reinvestment hate is 07.



We have Leinvestment Rate = 10%. : FV = 35027 (1+1.1+1.12+1.13) = 162560 307 COLUT OF THE TENT OF VAN MIRR= 4 16 2560.307 -1 = 0.1291 1,00,000 m 12 mil 20 mil .. MIRR= 12-91% when reinvestment rate in 107. NPV & TWALL = (8282 X 3.102) -10500 22) Resent value 0000 = (23300 1934) = 3 point 30191 NPV = present value of - Present value of

Cash in flow Cash outflows NPV of Thing 1 = (3293x3:545) - 10000 = 1673.685 Did tout 1 cint NPJ of Thing 2 = (14641 x0.8231) THOUSE I MATE 2049. 543 d) coll by capter = 147. NPJOJ Thing 2 > NPJ of Thing 1 made - C mint & 1911 hence thing 2 must be chosen when cost of capital is 5% MEN OF THE HIXE SEE - FLODES b. cost of capital = 8% NPV & Thing 1 = (3293 x 3.312) - 100 00 + hings is ent. Losses de 100 000 c= 10 10 con chiese and the state of t

		Date
re <sup>go</sup> in		
	NPV of thing 2 = (14641 × 0. 735), -100	00000 401.50
<u> </u>	NPV of thing 2 = [14841.136	
	EUS 047561 (E1.7:111111) 7	62.78
	NPV of Thing 1 > NPV of Thing 2	5.576
	NPV of Trung 1 - 1- 166.007 0	1 = 351M 1 81.
	: Thing 1 must be chosen when is	yr of capture.
	91.15	51 = 331131 -
c)	costi & capital = 11.1. 132 /211	
	(2224 2 102) -10000	
-	NPV of Thing 1 = (3293 x 3.102) -10000	(0)
	214.85	11905 A 1207 1
	NPV of Thing 2 = (14641 × 0.658) -10000	10100 1410-29
	NPV of Thing 2 - 1. 366. 22 Bys inc 243	LIXT - VYIA
	11. 11. 11. 11. 11. 11. 11. 11. 11. 11.	
	$\sim 100$	
	Moseover, NPV of Thing 1 >D while . A  Thing 1   Must be chosen when	UPV & Thing 2 50
	· This 1 / must be chosen when	est of apital is 11%.
	- Ining -	
	as Thing I return profit while this	92 leturs loss here.
	F 2019 593	
a)	cost of capital = 147: NPJ of Thing 1 = 100000000 (3293 x 2191 = -407,491	· · · · · · · · · · · · · · · · · · ·
	NPJ of Thing 1 = 0000000 (3293 x 2191	3)=10000 36911
	= -407,491	
1 5/2	singly be treated in the country	Felian Human
<u> </u>	NPV of Thing 2 = (14641 x 0.592) -10000 = -1332.528	
	= -1332.528	= 1mmes 12 1835 -d
	2-4	
·	Nev of Thing 2 of Thing 2, both are -ve	hence both 114
	things incue losses. so none suo	uld be to chosen

let cost of capital = 7%. NPV of thing 1 = (329 3 x 3.387) -10000 = 1153.39 2 1154 NPV of thing 2 = (14641 x0.762) - 10000 F1156.4 2 1156 at 7% cost of capital, the NPU'S of thing I and 2 are almost same. Thui, at this rate, One would be indifferent between choosing Thing I cuts NEV axis around 4600 2400 ONPU of Things ONPLOY Things - crossover discount rate 1200 400 TRR Hurg2 27. 0% 107 12/ 147 9 78/ 11.53y. Discount roate

		40	471	1482	yr3 1	424	475
_ Q3)a\	Annual Cost Sowings		150 000	150000	150000	150000	150000
	Taxat 30%. on Cost Savings		45000	45000	-45000	45000	-48000
	Tax saving on depreciation	. 1	30000	48000	288 00	17280	17280
	Initial investment	-500,000					
	Next Salvage Vaine						78640
	Net Cash flows	-500 000	135000	153 000	133800	122 280	200 9 20
	0	<b>.</b>		,			
	Net cash flows per a	jear a	u as fo	llows			
	years 7-500 000	U.	0	2			
-	Year 1   →   I35 000   net salvalge value = selling prce -tax on sp +tax gain on reamining value						
	Year 2 → 153000						
	Year 3 - 13 3800						
	Year 4 → 122280		DE .		.*		
	Year 5 → 200920				7	v	
<u> </u>	Formula used for	calcul	ating H	re abo	ne is	!-	
	Net case flows = 4 Ann	nal Lost	Saving	+(Tax	Savina	on dear	cuation)+
	Net case flows = (Annual lost saving+ (Tax saving on depreciation)+  (Initial investment) + (Net salvage Value)						
	+1	Tax at	30%	n cost	Savin	95)	
		\			0		- 4

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b)	90 911 92 943 944 455
229	Net carn flows +500000 135000 153000 133800 122280 200820
40° 47	Discount at 10% 1 0 909 0.826 0.757 0.683 0.621
100	Present value & Case flows 500 000 1227 27 126,446 100526 83519 124756
	Net Present Value =+500 000+122727 + 126446+ 100526+83519+ 124756
- = - *	Silving.
	Net Present value = 57.974 when cost of capitallis 10-1.
	07-17 V
c)	9r0 9r1 9r2 9r3 9r4 9r5
i i	Net Cam Hows -500 000 135000 153000 133800 122280 2009 20
	Discount at \$5%. 1 0.952 0.907 0.863 0.822 0.783
	Present Value of Camplows 500000 128571 138776 115581 100600 157426
	APRIL ME LES LES LANGER SECONDA L'INTERNA
	Net Present Value = -500000 + 128571 + 138776+ 115581 + 100600 + 157426
,	Contract Factor of the billion of th
	Net Present Value = 140955   When cost of capital is 5%
	(2 - et obe 12 - et 12 mg + 2 mg = 12 + 3)
d)	Propitability Index at 5%.
	NPV = 140955, Suital Suvertment (Io) = 500,000
	83.1=221
	Pî (Profitability Index) = NPV+Îo = 1.28
	Io Io
	; PI at 5/- = 1-28 misser 3 12 12 14 14
e)	30 E 31 TEN . 0 9,0 10 19, 1 9,20 1 473 7 479 975
1 34 1	Net Cash flow -500 000 135000 153 000 133800 122280 200920
LIKE	aumulative Cash flow - 500 000 - 365 000 -21200 -78200 44080 245,000
	25 J. 4408 (2. ~ V)

Payback Period = 3+ 78200 = 3.64 years

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. ^					
) fi	Discounted Pay back Period at 5%				
8262	Market				
(· · · · ·	Present Value of Cash flows 500 000 128571 138776 11333				
12425	Present Value of Cash flows -500 000 128571 138776 -15472 -16472 140954				
27 - 1 - 1	Discounted Pay back Period at 5% = 4+16472 = 14.104 years				
154126	157426				
<b>a</b> \	1RR= x + Px = I (=x+y) = P ==				
<b>g</b> )	Py-Py				
7.18	(-)				
7,6	y ₹= 10 y				
a. S.F.	J7-109.				
57926	2 5 79 54				
	Pax= NPV at 57. F Is = 140954 + 500000 = 640954				
-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
N GILL	trl = 10 + 557954				
	Act is relieved to the reavest Edebut a report the will all the				
	IRR = 5 4 500 + 6409 54 - 500000 (10-5)				
Var	640954 - 559754				
	= 5+ 140954 ×5				
	100.002 = (01 81200 - 1208 LANDED 220, 11 - WAN				
	11RR = 13.68-1				
<u> </u>	P) ( Reserved Line Ende of NPV+10 1-16				
h)	MIRR at 5% reinvestment rate				
7019	FV= 200920 + (1.05).122280+ (1.05)2133800 + (1.05)3153000 + (1.05)4				
- 111	350 1 008 2 1 00 8 61 1 35 000 1 00 00 1 00 1 1 1 1 1 1 1 1 1 1 1				
1 -24C 7	FV = 200920+128394+147514.5+177116.625+164093. 3438				
	FV = 818038. 4688				

frank i Huss : 12 face - 10 fil hear

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·		Page No
	MIRR = 5 818038.4688 -1	- 0.10347
	500 000	
	MIRR= 10.3474.	
		110,10 Hould invest
-i	At cost of capital 5%, Mighty	Assitive in this case
	in this mobol as the NPV is	port
	Also [IRR> cost & capital] and	MTRR > cost & capital
	Also [IRR> cost of capital] and	
(gu)	Building (31.5 year property) > Equipment (5 " ") >	\$ 400 000
	Building (513 year property)	\$ 100 000
	Equipment	
,	Mari 5 years building sold o	t > \$ 3 (0 000
	After 5 years, building 5010 0	11 → \$ 50 000
	4 4 4	13 - St. 1
	Inventory = \$ 50000, to	n = 30%
, T	The state of the s	ALL NO STATE OF THE PROPERTY O
	yo sales Expenses	
, at 11	2004 200,000 100 000	
	2005 30000 100 000	
	2006 3 00000 100 000	atiet a las exist wall
	2007 300 000 100 000	-13.
9	2008 50 000 20 000	
	May - Pal . The - I do	and the XIII and t
· ·	Enverment cash from!	er a dist
**	Asset COST > 50 000	
	Asset disposition -> 50000 for	inventory
CALL III	Tar effect & - 0	on its description that the same
	Asset disposition	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	· 如果, 是一种 " " " " " " " " " " " " " " " " " " "	

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_	Asset cost	→ 400 000 for Building
	" disposition > 350000	
	Tax effect of asset disposition 4041	
1,00	ofset cost ?	100 000 for equipment
	Aut dispos	tion 7 50 000
	Tor effect.	asset disposition > 15000
	DO	1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Operating ass	Liono.
	Year	40CF
-	2004	79809.52
	2005	14 809-52
	2006	149 809.52
	2007	149809.52
	2008	30 809.52
		and the state of t
	year 2004 → \$	DR = 200000 T = 03
	•	DE = 100000 DD = 20000+12698.4 = 32698.

DOCF = 100000x0.7 + 32698.4x0.3 = 79809.52

year 2005, 2006, 2007 → DR = 300 000, 7 = 03, DE = 100000 10= 32898.4 JOCF = 149809 -52

Year 2008 → DR = 60,000 T =0-3 , DE = 20000 DD = 32698.4 , DOCF = 30 809.52

Investmental Cash flow In the beginning: - - 50,000 - 400000 - 100000 = [-\$550000 5000 + 350000 - 4047. 2 +50000 - 15 000 At the end; = \$430 962 8