

Q7) An initial investment of \$1,000 will generate annual net revenues of \$400 for 12 years and have no salvage value. If the MARR is 25%, Find the external Rate of Return ERR%, if $\epsilon = \text{MARR}$.

- A) 10.5% B) 25% C) 26.16% D) 29.22%

Q8) What is the Simple payback period for this investment if the MARR is 18% per year and the capital investment is \$85,000?

End of year	1	2	3	4	5
Savings	\$45,000	\$45,000	\$30,000	\$40,000	\$46,000

- A) 3 Years B) 5 Years C) 1 Year D) 2 Years

Q9) You can buy a machine for \$100,000 that will produce a net income, after operating expenses, of \$10,000 per year. If you plan to keep the machine for four years, what must the market (resale) value be at the end of four years to justify the investment? $i=15\%$

- A) \$217,073 B) \$100,000 C) \$124,966 D) \$49,934 E) \$200,000

Final answer question (5 marks)

For the following mutually exclusive alternatives the study period is 10 years and the MARR = 12% per year answer the following questions

	A	B	C	D
Capital Investment	11,000	16,000	13,000	18,000
Annual Costs	250	300	400	100
Market Value	1,000	1,300	1,750	2,000
PW(12%)	-12,090	-17,276	???	-17,921

Q10) the PW of alternative C equals -14,696.58

Q11) The rejected alternatives are A and D

Q12) The first comparison in the incremental analysis should be $\Delta(???? - ????)$... $\Delta(C-A)$...

Q13) write down the equation of the IRR $\Delta(D-B)$

$-2000 + 200(P/A, 12\%, 10) = 0$

Q14) Rank order the alternatives from the best to the worst (if any)

$C > B > D > A$

Q15) Draw the cash flow diagram for the $\Delta(C-A)$

