

Software Project Management INF3708

Assignment 2 MEMO

Unique Number: 834687

Note: ALL pages indicated below refer to text in the prescribed textbook for this module Bob Hughes and Mike Cotterell, 2009. Software Project Management - Fifth edition. McGraw-Hill (London). ISBN: 9780077122799.

Q1. Calculate the Net Profit for each project. (6 marks)

Answer

Project A = R100,000.00, Project B = R25,000.00, Project C = R120,000.00

Project	Total income	Total costs	Net profit
A	350 000	250 000	350 000 – 250 000 = 100 000
B	325 000	300 000	325 000 – 300 000 = 25 000
C	320 000	200 000	320 000 – 200 000 = 120 000

Net profit = Total income – Total costs

Q2. Calculate the Return on Investment for each project. (6 marks)

Answer

Project A = 6.67%, Project B = 1.39%, Project C = 10%

Return on investment (ROI) or Accounting rate of return =

$$\frac{\text{AVERAGE annual profit}}{\text{Total investment}} \times 100$$

Project	Average annual Profit	Total investment	ROI
A	100 000/6	250 000	$(16666.7/250\,000) \times 100 = 6.67\%$
B	25 000/6	300 000	$(4166.7/300\,000) \times 100 = 1.39\%$
C	120 000/6	200 000	$(20\,000/200\,000) \times 100 = 10\%$

Q 3. Calculate the Payback Period for each project. (6 marks)

Answer

Project A at the end of year 5, Project B after mid of year 6 (roughly 5.67 years),
Project C at mid of year 5 (roughly 4.5 years)

Payback period is the time taken to break even or pay back the initial investment.

Q4. Calculate the Net Present Value for each project. (12 marks)

Answer

Project A = -R32982.50, Project B = -R86292.50, Project C = R7416.00

Net present value is the “a project evaluation technique that takes into account the profitability of a project and the timing of the cash flows that are produced” p30 - 33.

Year	Project A		Project B		Project C	
		At 12%		At 12%		At 12%
0	-250 000		-300 000		-200 000	
1	25 000	22 322.5	25 000	22 323.5	40 000	35 716
2	25 000	19 930	50 000	39 860	40 000	31 888
3	50 000	35 590	75 000	53 385	40 000	28 472
4	50 000	31 775	50 000	31 775	40 000	25 420
5	100 000	56 740	50 000	28 370	80 000	45 392
6	100 000	50 660	75 000	37 995	80 000	40 528
		217 017.5		213 707.5		20 7 416
	217 017.5 – 250 000 = -32 982.50		213 707.5 – 300 000 = -86 292.50		20 7 416 – 200 000 = 7 416	

Q5. Give reasons why project C is the best project to develop. (2 marks)

Answer

This is because Project C has the earliest payback period and a positive NPV