FINANCIAL MATHEMATICS

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SECTION- B

ROLL –80

Q1) Incremental cash flow

The cash flow that is acquired by a company when it takes on a new project is called Incremental cash flow.

ICF (incremental cashflow) = Revenue after tax – Expenses - Initial cost

Revenue = Exchange Charges + cost of service (domestic) + cost of service (international) + cost of service (new participants)

Revenue after Tax = Revenue * (Tax) (10%)

Expenses = Advertisement cost + Total cost – Side Benefits

Total Cost = Cost Decided + Increased Cost

Initial Cost = R&D cost + Introductory Cost + New Server Cost + Total Cost + Advertisement Cost

In Q1. I have compared incremental cashflow (ICF) of with Alternium and without Alternium

Here , we can see that ICF with Alternium has higher value because new number of participants are included in alternium which will increase the revenue of the company and therefore increases the value of ICF.

Q2) IRR and NPV

The metric used in financial analysis to estimate the profitability of potential investments is called Internal Rate of Return (IRR). It is a discount rate that makes the net present value (NPV) of all cash flows equal to zero in a discounted cash flow analysis.

The difference between the present value of cash inflows and the present value of cash outflows over a period of time is called Net present value (NPV). It is used in capital budgeting and investment planning to analyse the profitability of a projected investment or project. NPV is the result of calculations used to find today's value of a future stream of payments.

Formulae Used

I've used 'excel function' for calculating both **IRR** and **NPV.**

In Q2 we have Calculated IRR and NPV of given cashflows

Here we can see that ICF with Alternium is more profitable than without Alternium.

Therefore this a good investment for company.