HW - Chapter 8 - Risk Analysis- Q3

(i) Statement Showing the Net Present Value of Project M

Year end	Cash Flow (Rs.)	C.E.	Adjusted Cash flow (Rs.)	PV factor at 6%	Present value (Rs.)
1	4,50,000	0.8	3,60,000	0.943	3,39,480
2	5,00,000	0.7	3,50,000	0.890	3,11,500
3	5,00,000	0.5	2,50,000	0.840	2,10,000
Total PV of cash inflows					8,60,980
Less: Initial Investment					8,50,000
Net Present Value					10,980

Statement Showing the Net Present Value of Project N

Year end	Cash Flow (Rs.)	C.E.	Adjusted Cash flow (Rs.)	PV factor at 6%	Present value (Rs.)
1	4,50,000	0.9	4,05,000	0.943	3,81,915
2	4,50,000	0.8	3,60,000	0.890	3,20,400
3	5,00,000	0.7	3,50,000	0.840	2,94,000
Total PV of cash inflows					9,96,315
Less: Initial Investment					8,25,000
Net Present Value					1,71,315

Analysis: Since the net present value of Project N is higher, it should be accepted.

(ii) Certainty Equivalent (C.E.) Co-efficient of Project M i.e. 2.0 (0.8 + 0.7 + 0.5) is lower than that of Project N i.e. 2.4 (0.9 + 0.8 + 0.7). This means Project M is riskier than Project N as "higher the riskiness of a cash flow, the lower will be the CE factor". If risk adjusted discount rate (RADR) method is used, Project M would be appraised with a higher rate because of high risk.