HW - Chapter 7 - Capital Budgeting- Q7

1. Calculation of Base for depreciation or Cost of New Machine

Particulars	(Rs.)
Purchase price of new machine	4,50,000
Less: Sale price of old machine	(1,00,000)
Value of the block after purchase of new machine	3,50,000

2. Calculation of Profit before tax as per books

Particulars	Old machine	New machine	Difference
PBT as per books	3,24,750	3,87,250	62,500
Add: Depreciation as per books	24,000	41,500	17,500
Profit before tax & dep (PBTD)	3,48,750	4,28,750	80,000

Calculation of Incremental NPV

Yr	PBTD	Dep. @ 7.5%	PBT	PAT = PBT @ 70%	Cash Inflows	DF @ 10%	PV of Cash Inflows
1	80000	26250.00	53750.00	37625.000	63875.00	0.909	58062.38
2	80000	24281.25	55718.75	39003.125	63284.375	0.826	52272.89
3	80000	22460.16	57539.84	40277.888	62738.048	0.751	47116.27
4	80000	20775.64	59224.36	41457.052	62232.692	0.683	42504.93
5	80000	19217.47	60782.53	42547.771	61765.241	0.621	38356.21
6	80000	17776.16	62223.84	43556.688	61332.848	0.564	34591.73
7	80000	16442.95	63557.05	44489.935	60932.885	0.513	31258.57
8	80000	15209.73	64790.27	45353.189	60562.919	0.467	28282.88
9	80000	14069.00	65931.00	46151.70	60220.7	0.424	25533.58
10	80000	13013.82	66986.18	46890.326	59904.146	0.386	23123
							3,81,102.44
	Add: PV of Salvage value of new machine (Rs. 35,000 x 0.386)						13510.00
	Total PV of incremental cash inflows						3,94,612.44
	Less: NET Cost of new machine						(3,50,000)
	Incremental Net Present Value						44612.44

Analysis: Since the Incremental NPV is positive, the old machine should be replaced.