

Answer on Question #86342 Economics-Other

Question b)

ABC Ltd is considering the introduction of a new equipment at a cost of sh 90,000. The equipment has a useful life of four years and salvage value of sh 16,500 and installation costs of sh. 10,000. Assuming accelerated depreciation of 33.33%, 44.45%, 14.8% and 7.41 and further that the machinery will be housed at an abandoned warehouse with no alternatives use. The facility is expected to generate additional net operating revenue before depreciation and taxes as follows:

Year cash flow

1 sh. 35,167

2 sh. 36,250

3 sh. 55,725

4 sh. 32,258

If the tax rate equal 40%, estimate the projects relevant incremental cash flow.

Solution:

Initial Cash Outlay

Initial Cash Outlay = Equipment Cost + Installation Cost = sh. 90,000+ sh. 10,000 = sh. 100,000

Depreciations

Year	Depreciation
1	33.33% * sh. 100,000= Shs. 33,300
2	44.45% *sh. 66700 = Shs.29,648.15
3	14.8% * 37051.85 = Sh. 5483. 67
4	7.41% * sh. 31568.18 = sh.2339

Operating Cash Flows:

$CF_t = (\text{revenues} - \text{cash costs} + \text{non-cash expenses}) * (1 - \text{tax rate})$

$CF_1 = (\text{sh } 35,167 + \text{shs. } 33,000) * (1-40\%) = \text{sh. } 40,900.20$

$CF_2 = (\text{sh. } 36250 + \text{sh. } 29648.15) * (1-40\%) = \text{sh. } 39,538$

$CF_3 = (\text{shs. } 55725 + \text{sh. } 5483.67) * (1-40\%) = \text{sh. } 36, 725$

Terminal Cash flow: (ass salvage value and tax deduction from loss)

$CF_4 = (\text{shs. } 32258 + \text{sh. } 2339) * (1-40\%) = \text{sh. } 20,758.20$

Salvage Value = sh. 16,500

Book Value = sh. 29,229

Loss from Salvage = sh. 29,229 - sh. 16,500 = sh. 12729

Tax Deduction from Loss (at 40%) =sh. 5092

Therefore, final Cash flow = sh. 20,758.20 + sh. 16500 + sh. 5092
= sh. 9350

Therefore total Cash flows = sh. 42,350.20 + sh. 40,900.20 + sh. 39,538
+ sh. 36, 725

Cash Flows =sh. 159513

Therefore, Relevant Incremental Cash Flow = Total Cash Flows – Initial Outlay
= sh. 159513- sh. 100,000
= Sh. 59, 513

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