

Retained profit c/d	90,000
Additional information:	
Total current cost adjustment in total	Rs. 29,500
Gearing ratio	22.5%
Increase in value due to changes in price level on	
(i) Fixed assets	Rs. 18,000
(ii) Stock	Rs. 16,000

Required: (a) CC Income Statement (b) CCA Reserve [5+3=8]

Ans: (a) Retained profit c/d Rs. 67,137.50 (b) Rs. 56,862.50

27. 2063 Q.No. 12 Or

The Balance sheets under Historical Costing System for year 2003 and 2004 have been presented below:

Balance Sheets					
	2003 (Rs.)	2004 (Rs.)		2003 (Rs.)	2004 (Rs.)
Equity capital	100,000	100,000	Fixed assets (at cost)	100,000	100,000
Bank overdraft	40,000	25,000	Accumulated dep ⁿ .	(10,000)	(20,000)
Accounts payable	40,000	50,000	Inventory	30,000	40,000
Outstanding exp.	10,000	5,000	Accounts receivables	80,000	90,000
Reserve and surplus	60,000	70,000	Cash at bank	10,000	10,000
			Bills receivable	40,000	30,000
	250,000	250,000		250,000	250,000

Additional information: Price index was 100 when fixed assets were purchased. Price index at the end of 2003 was 200 and it reached to 250 at the end of 2004.

Required: ① Fixed assets adjustments ② Depreciation adjustments ③ Cost of sales adjustments (COSA) ④ Monetary working capital adjustment (MWCA) [2×4]

Ans: ① Rs. 80,000 & Rs. 120,000 ② Rs. 20,000 ③ Rs. 7,750 ④ Rs. 15,250

28. 2062 Q.No.14 OR

A company held the following assets and liabilities for through out the year 2004.

Cash at bank	Rs. 20,000
Accounts receivable	30,000
Bills receivable	10,000
Prepaid expenses	5,000
Accounts payable	30,000
Wages payable	5,000
Tax payable	10,000

Retail price index (RPI) for 2004

Beginning RPI	150
Ending RPI	180

The income statement of the company for the same year revealed the following:

	Rs.
Sales	150,000
Less: Cost of goods sold	
Beginning inventory	20,000
Purchases	60,000
Less: Ending inventory	(40,000)
Wages paid	30,000
Total cost of goods sold	70,000
Gross margin	80,000
Less: Operating expenses:	
Operating expenses	30,000
Interest expenses	5,000
Depreciation	20,000
Total other expenses	55,000
Retained earning	25,000

Required: ① Holding gain and loss from monetary assets and liabilities ② Reinstatement of income statement in CPP method [3+5]

Ans: ① Amount of holding loss Rs. 6,728, ② Retained profit c/d Rs. 16,636

29. 2061 Q.No.9

Historical Cost (HC) based income statement of a company is given below:

HC Incomes Statement of a Company for the year ending, year 5	
Sales	Rs. 400,000
Less: Cost of goods sold	210,000
Gross profit	190,000
Less: Operating expenses:	
General expenses	30,000
Depreciation	20,000
Debenture interest	25,000
	75,000
Net profit before tax	115,000
Less: Provision for taxes	55,000
Net profit after tax	60,000
Opening retained profit	35,000
	95,000
Less: Dividend	30,000
Retained profit at end	65,000

Additional Information:

- Gearing ratio 17.5%
- Amount of COS A Rs. 22,000
- Depreciation adjustment amount Rs. 27,000
- Amount of MWCA Rs. 5,600
- Increase value of assets to be credited to CCAR.
 - Fixed assets Rs. 6,200
 - Inventory Rs. 4,500

Required:

- Amount to be credited to CCAR.
- Current cost income statement showing CC profit or loss.

[3+5=8]

Ans: 1. Rs. 55,745; 2. Rs. 19,955

30. 2060 Q.No.12

A Ltd. Company provides you the following HC base balance sheet for the year ending Chaitra 30, 2055 and additional information for consideration:

HC Balance Sheet, Chaitra, 30 2055

Liabilities	Rs.	Assets	Rs.
Share capital	100,000	Plant at cost	200,000
8% debentures	80,000	Accumulated depreciation	(60,000)
Creditors	20,000	Inventory	50,000
Dividend proposed	15,000	Accounts receivable	30,000
Provision for tax	12,000	Cash at bank	40,000
Retained profit	33,000		
	260,000		260,000

Additional information:

The plant was purchased when price index was 100 and its price index reached to 160 at the end of Chaitra 30, 2055.

The replacement cost of inventory has been estimated to Rs. 62,000.

Information relating to CCA reserve are:

Depreciation adjustment	Rs. 22,500
COSA	7,500
MWCA	6,200
Gearing adjustment	25.4%
Increase value of plant	Rs. 74,000
Increase value of inventory	Rs. 12,000

Required: a. Amount to be credited to CCAR. b. CC balance sheet.

[4+4 = 8]

Ans: a. Rs. 113,005; b. Rs. 356,000

31. 2059 Q.No.9

The opening balance sheet and the income statement of current year of a company are given below:

HC balance Sheet of a company at the beginning of the current year

Liabilities	Amount	Assets	Amount
Sundry Creditors	38,000	Cash at bank	12,000
Expenses to be paid	7,000	Accounts receivable	18,000
Retained earning	35,000	Prepaid expenses	5,000
Share capital	1,00,000	Inventory	25,000
		Plant & Machinery	2,00,000
		Acc. Depreciation	(80,000)
Total	1,80,000	Total	1,80,000

Income Statement of current year of a company

Sales revenue		Rs. 2,40,000
Less: Purchases	1,10,000	
Opening stock	<u>25,000</u>	
	Rs. 1,35,000	
Less: Closing stock	<u>30,000</u>	1,05,000
Gross Profit		1,35,000
Less: Operating Expenses		
Salaries & wages	40,000	
Other expenses (Depreciation 20000)	<u>52,000</u>	92,000
Net Income		43,000
Retained profit b/d		<u>35,000</u>
Retained profit		<u>78,000</u>

During the year, the general price level rise evenly from 120 to 150.

Required: (a) Price level gain/ loss amount

(b) Restated income statement under CPP method.

[5+3=8]

Ans: a. Net monetary loss Rs.3,945, and Retained profit Rs. 37,583

32. 2058 Q.No.11

The historical cost income statement of a company for the year ending, Chaitra 31st, 2056 is given as follows:

Sales Revenues	Rs.4,50,000
Less: Opening stock	(50,000)
Less: Purchases	(3,00,000)
Add: Closing stock	<u>80,000</u>
Gross profit	1,80,000
Less: Operating Expenses	<u>(60,000)</u>
Income before interest and tax	1,20,000
Less: Income taxes	(28,000)
Less: Dividend	<u>(30,000)</u>
Retained profit for the year	<u>62,000</u>

Information about price index of the year:

Ending RP Index = 140

Beginning RP Index = 120.

Average RP Index = 125

Required: Amount of price level gain or loss.

[8]

Ans: Loss Rs. 10,800

33. 2057 Q.No.9

The Income Statement of a company for Chaitra 31st Year 6 is given as under:

Particulars	Amount	Amount
Sales Revenue		1,02,000
Less: Cost of Goods Sold:		
Opening Stock	15,000	
Purchases	<u>25,000</u>	
	40,000	
Less: Closing Stock	<u>10,000</u>	30,000
Gross Profit		<u>72,000</u>
Less: General Expenses (Including interest Rs.1000)*		<u>65,000</u>

	7,000
Add: Net Profit	10,000
Retained Profit b/d	17,000

Additional Information:

	Year 6	
	Baisakh	Chaitra
a. General price	125	225
b. Gearing Adjustment (amount) is given as Rs.1,650		
c. Depreciation Adjustment comes to Rs.2,500		
d. MWCA comes to Rs.2,000		

Required:

- Cost of Sales Adjustment
- Current Cost Profit & loss a/c

[3+5=8]

Ans: i. Rs. 8,223; ii. Rs.5,927

34. 2057 (Cancelled) Q.No.16

The following are the HC base balance sheets of N Ltd for the year ending Year 5 and Year 6

Liabilities	Year 5	Year 6	Assets	Year 5	Year 6
Creditors	5,000	5,000	Cash	10,000	20,000
10% Loan	20,000	20,000	Accounts receivable	10,000	15,000
Share capital	55,000	55,000	Stock	15,000	10,000
Retained earning	—	5,000	Land	20,000	20,000
			Machinery & plant	25,000	25,000
			Less: Depreciation		(5,000)
Total	80,000	85,000	Total	80,000	85,000

The price index was 100 at the end of the year 5, but it was increased to 200 at the end of year 6. The value of fixed assets is increased by Rs.45,000 and Rs.40,000 in year 5 and year 6 respectively. The value of inventory and depreciation are increased by Rs.4,000 and Rs.5,000 respectively in year 6 only.

Required:

- Cost of sales adjustments (COSA)
- Monetary working capital adjustment (MWCA)
- Gearing adjustment (Ratio)
- Amount to be adjusted to current cost adjustment (CCAR)

[3+3+4+5=15]

Ans: a. Rs. 10,000; b. Rs. 5,000; c. 4.673%; d. Rs. 63,065

35. 2056 Q.No.11

Following were the HC based comparative Balance Sheets for the years ending 1995 & 1996.

HC based Comparative Balance Sheets

Liabilities	1995	1996	Assets	1995	1996
Share Capital	40,000	40,000	Fixed assets	30,000	27,000
Loan	15,000	20,000	Stock	20,000	28,000
Creditors	15,000	20,000	Debtors	18,000	22,000
Reserves	8,000	12,000	Cash	10,000	15,000
Total	78,000	92,000	Total	78,000	92,000

Additional information:

- Fixed Assets were acquired when the price index was 100. Price Index in respect of them was 150 at the end of 1996. The fixed assets are to be depreciated @ 10% on original cost.
- The replacement cost of stock was
- Retail price index at the beginning of 1996 was 100 & at the end of 1996 it was 120.

Required:

- Amount of additional depreciation to be charged to profit & Loss Account. [2]
- Amount to be credited to Current Cost Account Reserve of Fixed Assets. [2]
- Amount in respect of Cost of Sales Adjustment. [2]
- Amount in respect of Monetary Working Capital Adjustment. [2]

Ans: i. Rs. 1,500; ii. Rs. 13,500; iii. Rs. 4,334 nearly; iv. Rs.466 nearly

36. 2055 Q.No.16 OR

Following were the historical Cost(HC) based comparative Balance Sheets for the years ending 2052 & 2053 Income statement for the year ended Chaitra, 2053

HC based comparative Balance Sheets

Liabilities	2052	2053	Assets	2052	2053
Share capital	50,000	50,000	Plant at cost	120,000	1,20,000
10% debentures	20,000	35,000	Accumulated depreciation	(48,000)	(60,000)
Creditors	13,000	23,000	Stock	20,000	40,000
Proposed dividend	6,000	8,000	Book debts	5,000	18,000
Retained earning	12,000	21,000	Cash & Bank	4,000	19,000
	1,01,000	1,37,000		1,01,000	1,37,000

HC based Income statement for the year ended Chaitra, 2053

Particulars	Amount	Amount
Sales		1,44,000
Less: Cost of Sales (Excluding Depreciation)		1,11,500
Gross Profit		32,500
Less: Depreciation (10% on Original cost)	12,000	
Interest on Debenture	3,500	15,500
Net Profit		17,000
Add: Opening retained earning		12,000
		29,000
Less: Dividend Proposed		8,000
Closing Retained Earning		21,000

Information to be considered

Prices of plant have risen to 150% since their purchases (Installations) till 2052 & to 180% by the end of 2053.

The cost of purchases increased by 20% during the year.

	2052	2053
The replacement price of stock was	Rs.23,332	Rs.42,000

Required:

- Amount of Depreciation Adjustment [1.5]
- Amount of Cost of Sales Adjustment [1.5]
- Amount of Monetary Working Capital Adjustment [1]
- Amount of Gearing Adjustment [2]
- Increase Value of Assets (Including Inventory) [1+1]
- Total Amount credited to Current Cost Accounting Reserve (CCAR) [2]
- Income Statement under current cost [2]
- Balance Sheet under current cost [3]

Ans: a. Rs. 24,000; b. Rs. 5,334 (appr.); c. (Rs. 1,216) nearly; d. Rs. 3,353 nearly; e. (PLANT in 2052 Rs. 36,000, 2053 Rs. 48,000) and (INVENTORY in 2052 Rs. 3,332, 2053 Rs. 2,000); f. Rs. 74,765; g. (Rs. 3,765); h. Total Rs. 187,000

11. Accounting for Capital Budgeting**Theoretical Questions****1. 2072 Q.No. 4**

Is it necessary to consider time value of money in capital budgeting decision? [2]

2. 2072 (ii) Q.No. 5

Explain briefly the treatment of working capital for calculation of cash inflow and cash outflow (NCO). [2]

3. 2071 Q.No. 2

Write about the differences between book salvage value and cash salvage value. [2]

4. 2070 Q.No. 1

What is capital budgeting? Mention the features of capital budgeting. [2 + 3]

5. 2069 Q.No. 3

Mention the different methods of discounted cash flow estimation. Discuss briefly any one of them. [3+2]

6. 2067 (I) Q. No. 3

Write about the discounted cash flow technique of evaluating investment proposal. [5]

7. 2066 Q.No. 2

"The capital budgeting gives more importance to cash flows than net profit." Discuss. [5]

8. 2063 Q.No.2

How is tax effected, when the book salvage value of a machine differs from cash salvage value in replacement decision? Write your answer with suitable examples. [5]

9. 2062 Q.No.7 OR

Write briefly about the capital budgeting. [5]

10. 2060 Q.No.2

Define capital budgeting. Write about the evaluation techniques to analyse profitability of investment. [2+3=5]

11. 2059 Q.No.2

Define about the discounted cash flow method of evaluating investment proposal. [5]

12. 2059 Q.No.14 OR

Write in brief about the IRR approach to investment analysis. [5]

13. 2058 Q.No.12

Define payback period and mention at least two advantages of payback period. [2+3=5]

14. 2057 Q.No.14

Write the meaning of accounting rate of return. [5]

15. 2057 (Cancelled) Q.No.13

What do you mean by internal rate of return? Given the choice between NPV and IRR which one will you prefer and why? [2+3=5]

16. 2056 Q.No.13

Why capital budgeting process gives emphases to cash flows instead of net profit? Comment briefly. [5]

17. 2055 Q.No.12

In about five to seven sentences write what you know about the discounted cash flow technique. [5]

Numerical Problems**18. 2072 Q.No. 12**

A company is planning for the replacement of existing machine with new one. The existing machine has a current book value of Rs.640,000 and remaining life of 5 years with zero book salvage value at end. It could be sold in the market, now at Rs.700,000 or Rs.100,000 after 5 years.

The cost of new machine is 1,000,000. The additional amount needed is Rs.50,000 for installment and Rs.50,000 for working capital. Life of new machine is 5 years. The new machine will save Rs.100,000 after depreciation and before tax.

The book salvage value and cash salvage value of new machinery after 5 years is Rs.200,000 and Rs.300,000 respectively. The corporate tax rate is 50% and rate of return is 12%

Required: ① Net cash outlay ② Annual differential cash flow after tax ③ Differential cash flow after tax for 5th year ④ Decision regarding replacement of the machine using net present value method. [2+3+3+2]

Ans: ① (Rs.430,000); ② 92,000; ③ 342,000; ④ 43,482.4; replace

19. 2072 (ii) Q.No. 12

A machine purchased 5 years ago for Rs.150,000 has been depreciated to a book value of Rs.75,000. The machine originally has the estimated life of 10 years and zero salvage value. The replacement machine will cost Rs.280,000 plus an additional Rs.20,000 to transport it. The operating cost per year will be reduced by Rs.41,000 for its life period of 5 years. The

old machine could be sold at a profit of Rs.60,000 at present. The replacement machine will have no salvage value at end. The company's tax rate is 50%. The minimum cost of capital is 8%.

Required: ① Net cash outlay ② Incremental CFAT ③ IRR ④ Decisions [3+3+3+1=10]

Ans: ① (Rs 195,000); ②: 43,000; ③ 3.35%; ④ should not be replaced

20. 2071 Q.No.12

A company is considering to purchase a machine. There are two machines available each cost Rs.500,000. Life of both machines is 5 years. The cost of capital is 12% and expected net cash flow for five years are as follows:

Year	Machine X	Machine Y
1	200,000	100,000
2	200,000	150,000
3	200,000	200,000
4	200,000	250,000
5	200,000	300,000

Required: Evaluation of machine by following methods:

① Payback period ② Net present value ③ Internal rate of return [2+4+4=10]

Ans: ① 2.5 years and 3.2 years ② Rs. 220,960 and Rs. 180,325 ③ 28.65% and 23.296%

21. 2071 Old Q.No.14

Kantipur Plastic Company has been using a machine which was purchased four years ago at a cost of Rs.360,000. The machine can be used for further four years after which it realizes Rs.20,000 cash. The machine depreciates in straight line to Rs.40,000 book value.

The present sales of the company is 20,000 units at Rs.40 each. The variable cost of the company is 40% of sales and needs allocation of Rs.250,000 for annual fixed costs inclusive of depreciation.

The management accountant of the company has collected the following information for replacement of the existing machine to meet 50% additional demand as stated in the marketing manager's report.

The commissioning of a new machine to meet the rising market demand costs of Rs.825,000 including setting charges of Rs.60,000 and Rs.120,000 additional net working capital requirement which realizes by year 4 end. The machine depreciates in straight line leaving Rs.30,000 book value in 4 years after which it will realize Rs.50,000 cash.

The selling price per unit, variable cost percentage and fixed costs excluding depreciation of the company will remain unchanged despite increase in sales.

The old machine realizes Rs.150,000 cash on sale at the time of replacement.

The marginal tax rate is 40%. The cost of capital is 15% p.a.

Required: ① Net capital outlay ② Annual CFAT ③ Terminal CFAT ④ NPV ⑤ Suggestion to purchase the new machine. [1+2+1+3+1=8]

Ans: ① Rs. (775,000) ② Rs. 207,500 ③ Rs. 341,500 ④ Rs. (105,966.3) ⑤ Should not be purchased

22. 2070 Q.No. 16 OR

Grand Company's executive team decided to get financial appraisal of its scheme of liquidating on old and worn out machine by a new machine.

The new machine needed to be procured for replacing the old and worn out machine costs Rs. 620,000. The carriage and layout charges of the machine amounting to Rs. 50,000 are needed to be incurred. The machine is expected to run for 5 years and depreciates in straight line to Rs. 30,000 book salvage value after which it realizes Rs. 60,000 net of tax cash salvage value. The new machine is expected to save Rs. 164,000 annual expenses excluding depreciation.

The old and worn out machine needed to be replaced was purchased 5 years ago at a cost of Rs. 200,000.

The depreciation on the machine was charged on straight line basis to zero value. The old and worn out machine can be sold for Rs. 220,000 at the time of replacement. The machine can be used for further five years after which it would realize Rs. 40,000 cash salvage value.

The return on investment expected by the company is 12% p.a. The corporate tax rate imposed is 40% on normal income and 25% on capital gain.

Required: ① Net Capital Investment ② Annual CFAT ③ Terminal CFAT ④ NPV ⑤ ARR
⑥ IRR ⑦ Desirability on the scheme

$$[3 + 2 + 1 + 3 + 2 + 3 + 1 = 15]$$

Ans: ① Rs. 495,000 ② Rs. 141,600 ③ Rs. 177,600 ④ Rs. 35,852 ⑤ 13.58% ⑥ 14.82% ⑦ Desirable

23. 2069 Q.No. 13

A company is considering replacing an existing machine with a newer and efficient one costing Rs. 430,000 and requiring Rs. 20,000 for shipping and erection. The machine also requires an additional working capital of Rs. 50,000 and has an estimated useful life of 5 years with book salvage value of Rs. 50,000. The machine is expected to save annual operating cost of Rs. 62,000 for 5 years. The existing machine has a book value of Rs. 200,000 and remaining useful life of 5 years. The original cost of machine was Rs. 320,000 with useful life of eight years and zero salvage value. But if it is sold now, the company would be received Rs. 330,000.

The company is in 40 percent tax bracket and capital gain tax rate is 30%. The cost of capital is 10 percent and company uses straight line depreciation.

Required: Should the company acquire the new machine? Use NPV method for evaluation. [8]

Ans: NCO = Rs. 221,000; Annual CFAT = Rs. 53,200; FYCFAT = Rs. 153,200; NPV = Rs. 42,760.56

24. 2068 (I) Q.No. 14

A company is considering to replace an existing machine by a new machine. The following details are provided.

- The existing machine is 5 years old and has 5 more years of expected useful life. The book salvage and cash salvage value of existing machine at present are Rs.100,000 and Rs.120,000 respectively. The cash salvage value of existing machine at the end of 5th year from now will be Rs.4,000.
- The purchase price of new machine is Rs.200,000. The new machine will last for 5 year with book and cash salvage value of Rs.20,000.
- The new investment requires Rs.10,000 additional working capital.
- The expected annual earning before depreciation and tax of old machine and new machine for 5 years will be Rs.200,000 and Rs.230,000 respectively.
- The minimum rate of return is 10% and corporate tax is 50%. Both machines are depreciated on straight line basis.

Required:

- Net Cash Outlay, ② Annual differential CFAT, ③ Differential CFAT for final year, ④ Desirability of the new machine using NPV technique.

$$[1+2+2+3=8]$$

Ans: ① Rs. 100,000 ② Rs. 23,000 ③ Rs. 51,000 ④ Rs. 4,574

25. 2068 (II) Q.No. 13

A company decided to replace its old machine with New Automated machine. The old machine was purchased for Rs.800,000 5 years ago having life of 15 years with book salvage value of Rs.200,000. The old machine can be sold for Rs.500,000; today or for Rs.100,000 at the end of life.

The New Automated Machine can be purchased for Rs.1,200,000. The working capital requirement increased by Rs.100,000. The new machine can be sold for Rs.200,000 at the end of 10 years of life. The operating efficiency of New machine can save Rs.150,000 as operating expenses per year over the period of life. The company is in 40% tax bracket and its required rate of return is 10%.

Required: ① Net Cash Outlay (NCO) ② Annual cash flow after tax (CFAT) ③ Final year cash flow after tax ④ Desirability of the Automated New machine

$$[4 \times 2 = 8]$$

Ans: ① Rs. 760,000 ② Rs. 122,000 ③ Rs. 202,000 ④ Rs. 20,469

26. 2067 (I) Q. No. 14

A company is using machine X since last five years. And the machine X related information is given below:

Original cost:	Rs. 220,000
Salvage value at end:	Rs.20,000
Life:	10 years
Annual sales:	Rs. 295,000
Yearly operating cost:	Rs.210,000

The company has an opportunity to invest in machine Y which would replace machine X. Machine Y would cost Rs. 160,000 and will have salvage value of Rs.40,000 at the end of 5 years of working life. It will generate sales of Rs.310,000 per year and help to reduce operating expenses by Rs.20,000 per year.

If the machine X is replaced by machine Y the X will fetch Rs.70,000 cash, net.

The company is within 50 percent tax bracket and its cost of capital comes to 10 percent.

Required: (1) Differential NCO (2) Annual operating cash flow (differential) (3) Final year's CF, and (4) Desirability of replacement proposal using NPV. [2 + 2 + 1 + 3 = 8]

Ans: (1) Rs. 65,000 (2) Rs. 19,500 (3) Rs. 39,500 (4) Rs. 21,339

27. 2067 (II) Q. No. 14

The supervisor of a company is considering the replacement of some machinery. This machinery has zero book value but its current market value is Rs.80,000. One possible alternative is to invest in new machinery, which has a cost of Rs.600,000. The new machinery would produce estimated annual cash saving of Rs.100,000 (CFBT). The estimated useful life of the new machinery is 10 years. The company uses straight line method of depreciation. The new machinery has an estimated salvage value of Rs.120,000 at the end of 10 years. The investment in the new machine would require an additional investment in working capital of Rs.50,000 which would recover after 10 years. The tax rate is 30%. The company has a 10% hurdle rate.

Required: (1) Net Cash Outlay (2) Annual Net Cash Flows (3) Net Cash Flows for final year (4) Net Present Value and viability of the project. [2+2+2+2 = 8]

Ans: (1) Rs. 594,000 (2) Rs. 84,400 (3) Rs. 254,400 (4) Rs. 9,869

28. 2066 Q.No. 11

A business promoter's team has finalized a budget for machine proposed, net working capital and pre-operation management expenses to be made in the initial period of the newly ventured work.

Rs. 875,000 for the machine proposed.

Rs. 120,000 for net working capital to be released after 5 years.

Rs. 75,000 for pre-operation management expenses to be capitalized.

The newly ventured work is expected to produce 150,000 units annually realizing @ Rs. 8.50 per unit on sale for five years.

The projected annual operating cash expenses will be Rs. 900,000 excluding the amount of depreciation chargeable under straight line method leaving Rs. 50,000 book value and capitalized expenses required to be written off within 5 years.

The machine after the lapse of 5 years is expected to realize Rs. 75,000 net of tax cash salvage value.

The cash outlay should meet minimum return of 12%.

The tax chargeable on the income of such type of venture will be 40% which will remain unchanged during the venture period.

Required:

1. Initial investment
2. Annual operating cash flows (OCF)
3. Net cash flows for the final year (Final year OCF)
4. Net present value
5. Comment on the viability of the venture. [1+2+1+3+1=8]

Ans: (1) Rs. 10,70,000 (2) Rs. 2,97,000 (3) Rs. 4,92,000 (4) Rs. 111,239

29. 2065 Q.No. 12

A company is considering the replacement of an existing machine. The following details are provided:

- a. The purchasing price of the new machine is Rs. 100,000 and an additional Rs. 20,000 will be needed to install the machine and Rs. 30,000 for working capital. The machine is expected to result in incremental annual saving of Rs. 40,000 after charging depreciation and before tax. The book and cash salvage of new machine after 4 years will be Rs. 20,000 and Rs. 30,000 respectively.
- b. The book value of the existing machine at present is Rs. 40,000 and it will be zero at the end of 4 years from now. The cash salvage value at present is Rs. 50,000 but in 4 years it will be Rs. 10,000.
- c. The after tax minimum required rate of return is 10% and tax rate is 50%. Both machines are depreciated on straight line basis.

Required:

- (a) Net cash outlay (b) Annual differential cash flow after tax
 (c) Differential CFAT for final year (d) Desirability of the new project. [2+2+1+3=8]
 Ans: (a) NCO Rs. 105,000; (b) Annual CFAT Rs. 35,000;
 (c) CFAT for final year Rs. 85,000; (d) NPV Rs. 40,097

30. 2064 Q.No. 12

A business promoters' team has recently completed a feasibility study of its new venture. The feasibility study made provisions of Rs. 530,000 as the cost of the plant suitable for the venture and Rs. 40,000 for erection of the plant. Rs. 50,000 as a provision for pre-operation management cost has been made. An additional provision of Rs. 60,000 for net working capital, which will continue till the operation of plant.

The plant will run for 10 years and straight-line depreciation will be applicable to the book value to Rs. 20,000. However, plant will realize Rs. 75,000 as cash salvage value upon lapse of its economic life. The output expected out of the plant will generate sales revenue of Rs. 625,000. An operating cash cost of Rs. 350,000 and annual fixed costs equal to Rs. 100,000 excluding depreciation of plant will be needed for pre-operation management cost also to be written off in 10 years. The rate of return expected on investment is 12%. The tax rate on the corporate net income is 50%.

Required: (a) Initial investment on the venture (b) Annual CFAT (c) Final year CFAT (d) NPV and comment on the profitability of the venture [2+2+1+3=8]

Ans: (a) NCO Rs. 6,80,000 (b) Annual CFAT Rs. 117,500
 (c) Final year CFAT Rs. 2,25,000 (d) NPV Rs. 18,514

31. 2063 Q.No. 13

An industry is exploring the potentiality of increasing the profitability. Since, the present operating plant is not possible to serve the purpose it is considering for replacement of the existing plant. The present plant is expected to realize Rs. 200,000 cash salvage value from the market. The plant was purchased 3 years ago at a cost of Rs. 180,000. The plant is expected to operate for further 5 years after which it will realize cash salvage value of Rs. 25,000 and zero book salvage value. The plant chosen for replacement of the old plant costs Rs. 800,000 and runs for 5 years leaving Rs. 50,000 as book salvage value. The realizable market value of the plant after 5 years will be Rs. 75,000.

A provision of Rs. 150,000 will be needed for carriage inward and installation of the plant. The operation of the proposed plant will increase the present volume of production and sales of 100,000 units by 40%. The unit sales price of Rs. 18 and annual operating cash expenses per unit of Rs. 12.60 will be remained unchanged. The present rate of 40% tax on ordinary income and 20% on capital profit will remain the same for the period of 5 years. The rate of return expected on investment is 10% p.a.

Required: ① Net capital outlay ② Estimation of net cash inflows ③ Estimation of final year cash inflows ④ IRR [2+2+1+3]

Ans: ① Rs. 781,000; ② Annual differential CFAT Rs. 192,600 ③ Rs. 242,600 ④ 9.03%

32. 2062 Q.No.10

A water-processing factory has finalized feasibility study of water distillation scheme.

The scheme needs installation of plant that operated for 10 years. The catalogue price of the plant is Rs. 700,000. The commissioning and arrangement of plant layout need Rs. 230,000. An additional amount of Rs. 120,000 is needed for the registration of the factory and overall project management. The estimated book salvage value of the plant after 10 years is Rs. 50,000 and the plant will realize cash salvage value of Rs. 80,000 after the lapse of plant life. The estimated sales price per bottle is Rs. 20 and operating cash expense is 4/5th of the sales revenue. The targeted annual production and sales is 70,000 bottles. The desired return on investment is 12% p.a. and tax payable by the factory on overall income is 40%.

Required: ① Initial capital outlay ② Estimated net cash inflows ③ Estimated final year cash inflows ④ NPV [2+2+1+3]

Note: Additional amount for registration and project management expenses are assumed as capitalized expenses. Hence, written off in 10 years.

Ans: ① NCO Rs. 10,50,000 ② Annual CFAT Rs. 208,000 ③ Final CFAT Rs. 276,000 ④ Rs. 147,138

33. 2061 Q.No.12

A workshop is trying to install a recently introduced machine that cost Rs. 450,000 by replacing an old machine. The recently introduced machine requires layout expenses of 25,000.

The operation of the new machine is expected to increase annual sales volume by 60 percent for 5 years maintaining the present ratio of operating expenses on sales excluding depreciation. The details of the old machine chosen for replacement are given below:

Annual sales	Rs. 400,000
Less: Operating expenses excluding depreciation	Rs. 200,000
Depreciation (SLM)	Rs. 40,000
Total expenses	Rs. 240,000
Operating income	Rs. 160,000

The old machine has Rs. 200,000 book value today.

The expected disposal value is Rs. 150,000 if sold today.

The desired rate of return is 12 percent.

The workshop is discharging 45 percent tax liability.

Required: (a) NCO (b) Annual CFAT (c) Evaluating the net benefit (NPV), suggest about the desirability of purchasing the new machine [2+3+1]

Ans: a. Rs. 302,500; b. Rs. 90,750; c. Rs. 41,515

34. 2060 Q.No.10

A manufacturing concern is exploring about the impact of phasing out an existing machine for reducing of annual operating expenses.

The proposed new machine will cost Rs. 300,000 for installation.

The annual operating expenses expected is Rs. 80,000.

The expected life of the new machine is 5 years.

The existing machine listed for phasing out has current cash salvage value of Rs. 150,000.

The machine was purchased 5 years ago at a cost of Rs. 125,000.

The machine is still expected to run for 5 more years:

The annual operating expenses of the machine is Rs. 160,000 and its expected to remain the same in future also.

The firm has been paying 40 percent tax on income and 30 percent tax on capital profit.

The concern is discharging 15 percent cost of capital.

Required: (a) Initial investment.

(b) Annual CFAT

(c) Showing necessary calculations, comment on the profitability of phasing out scheme. [1+1+3+1]

Ans: a. Rs. 182,500; b. Rs. 67,000; c. PI 1.23

35. 2059 Q.No.11

A spinning mill is working on investment analysis for purchasing an auto-spinning plant.

The necessary particulars about the plant are given below:

The cost of plant is Rs.500000.

Technicians charge for installation works is Rs.100,000.

The extract from pro-forma income statement for the coming five years of machine life is presented below:

Years (in Rs.)	1	2	3	4	5
Sales	600000	600000	500000	200000	500000
Less: Variable manufacturing cost	240000	240000	200000	80000	200000
Fixed " " (excluding depn)	50000	50000	50000	50000	50000

The mill enjoys full tax exemption in the first year and is required to discharge 40% tax on income from the 2nd year onwards. The minimum rate of return expected is 10%.

Required:

a. Initial capital required

(1)

b. Annual CFAT including final year

(2+1)

c. Using suitable evaluation tool, comment on the probability of the proposed investment (3+1)

Ans: a. Rs. 6,00,000; b. Rs. 3,10,000, Rs. 2,34,000, Rs. 1,98,000, Rs. 90,000, Rs. 1,98,000; c. NPV Rs.

208,364, Profitable

36. 2058 Q.No.2

A company is considering to replace an existing machine by a new modern machine. The existing machine is 5 years old and has 5 more years of expected useful life. The new machine also has an estimated 5 years service life with Rs.20000 salvage value in 5 years. The book and cash salvage value of existing machine at present is Rs.50000 and Rs.60000 respectively. The cash salvage value of existing assets after 5 years would be Rs.2000. The new investment requires Rs.10000 additional working capital. The annual cash flow after tax for both machines for 5 years are as under:

	Existing Rs.	New Rs.
Annual sales	200,000	230,000
Less: Annual cost	100,000	110,000
Cash flow before tax	100,000	120,000
Less: Annual depreciation	10,000	16,000
Net income before tax	90,000	104,000
Less: Tax (30%)	27,000	31,200
Net income after tax	63,000	72,800
Add back Depreciation	10,000	16,000
Annual cash flow after tax	73,000	88,800

Required:

- Net cash outlay or net investment
- Annual differential cash flow after tax or net cash flow
- Differential CFAT for final year [3+1+2+2=8]
- Should the company purchase the new machine if required rate of return is 20%.

Ans: a. Rs. 53,000; b. Rs. 15,800; c. Rs. 44,400; d. Rs. 5,746

37. 2057 Q.No.1

A company purchased a machine 5 years ago at a cost of Rs.500,000. The machine had an expected life of 10 years at the time of purchase and depreciated by straight-line method toward a salvage value of Rs. 50,000. A new machine can be purchased for Rs. 700,000. Its installation cost is Rs.50,000. The new machine being highly automatic would require additional investment of Rs.50,000 in working capital. During its 5 years life it will reduce cash operating expense by Rs.195,000 per year while the sales will remain the same. At the end of 5 years, the new machine would have a book and cash salvage value of Rs. 50,000 and Rs.60,000 respectively. The old machine can be sold today for Rs.325,000. The firm's tax rate is 30%. The appropriate rate of return will be 12%.

Required:

- Net cash outlay or net investment
- Annual cash flow after tax or net cash flow
- Net cash flow for final year
- Should the company purchase new machine? [2+2+2+2]

Ans: a. Rs. 4,90,000; b. Rs. 1,65,000; c. Rs. 2,22,000; d. NPV Rs. 137,118, e. Yes

38. 2057 (Cancelled) Q.No.3

A company is considering the replacement of an existing machine. It has Rs.100000 book value at present but its current market value is Rs.80000. The old machine will have zero salvage value in 5 years. The new machine will cost Rs.200000. This new machinery would produce estimated annual operating cash saving of Rs.96000. The estimated useful life of the new machine is 5 years and estimated salvage value at the end of 5 years would be Rs.20000. The company uses straight line method of depreciation. The investment in the new machinery would require additional working capital of Rs.20000. The cash salvage value of old and new machinery in 5 years would be Rs.5000 and Rs.30000 respectively. The corporate tax rate is 30%.

Required:

- Initial cost of investment
- Annual cash flow after tax or net cash flow
- Final year cash flow after tax
- NPV of differential cash flow at 12% factor [2+4=8]

Ans: a. Rs. 1,34,000; b. Rs. 72,000; c. Rs. 1,15,500; d. Rs. 1,50,221

39. 2056 Q.No.2

Sony Television of Japan approached Sony Television of Nepal for manufacturing a car Television in Nepal with the detail mentioned below:

- Annual production capacity of 500 sets for five years
- The selling price per set expected Rs.10,000

- iii. The variable cost percentage on sales will be 60% and yearly fixed manufacturing cost excluding depreciation cost will be expected to be Rs.200,000
- iv. Net working capital requirement of Rs.50000 at the beginning
- v. Pre operation and advertisement expenses in the first year will be Rs.50,000
- vi. The cost of plant and installation expenses will be Rs.300,000 and Rs.500,000 respectively
- vii. Cash and book salvage values of the machine expected at the end of five year are Rs.150,000 and Rs.100,000 respectively
- viii. The income tax applicable is 30% and expected minimum return is 10%

Required:

- a. Net capital requirement in the beginning [1]
- b. Annual CFAT (Net cash flow) [2]
- c. Terminal cash flow (cash flow in the final year) [1]
- d. Net present value of project [3]
- e. Comment on profitability [1]

Ans: a. Rs. 36,00,000; b. For Year 1 Rs. 14,29,000; For Year 2 to 4 Rs. 14,64,000; c. Rs. 16,49,000; d. Rs. 20,82,926; e. Profitable

40. 2055 Q.No.8

Advertising Nepal Incorporation has made two offers for advertising in Television for five years, to a newly established firm. The company intends to market a new product that will be launched within few days. The advertising charge for the offer is

- a. Deposit a lump sum of Rs.90,000 in the beginning.
- or
- b. Payment of Rs.100,000 in four equal annual installments at the end of each year plus Rs.20,000 cash deposit in the beginning.

The market rate of investment is 10 percent.

Required: Selection of the options by applying NPV approach. [5]

Ans: TPV of 2nd offer Rs.99,250

12. Accounting for Capital Structure (Determination of Financing Mix)

Theoretical Questions

1. 2072 Q.No. 5

Define the term leverage. [2]

2. 2071 Q.No.5

Give the meaning of operating leverage. [2]

3. 2070 Q.No.3

What is leverage? Explain its use in business firms. [2+3]

4. 2059 Q.No.3

Define the term leverage and show its impact on financing capital. [2+3]

5. 2056 Q.No.12

How would you define composite leverage? State the approaches of computing it. [3+2]

Numerical Problems

Leverage

6. 2072 Q.No. 10

The capital structure of a company consists of:

Equity share capital of Rs.100 each	Rs.500,000
10% Preference share capital	Rs.300,000
8% Debentures	Rs.200,000
Tax rate is 50%	

Required: EPS at EBIT level of 200,000. [2]

Ans: Rs 12.40

7. 2072 (ii) Q.No. 6

The following information is given

	Plan I	Plan II
Equity shares of Rs.100	200,000	400,000
12% Debenture	200,000	-

Tax rate = 45%

Required: Indifference point

[2]

Ans: Rs 48,000

8. 2071 Old Q.No.5

An industry sold 50,000 units for Rs.40 per unit in the current year. The annual fixed cost of the industry is Rs.500,000.

The DOL of the industry at the present level of sales is 2 times.

Required: Variable cost percentage on sales

[4]

Ans Variable cost = Rs. 10,00,000; Variable cost percentage on sales = 50%

9. 2070 Q.No. 5

Reliable company sold 8,000 units @ Rs. 50 each in a year after incurring Rs. 20 for each unit. The annual fixed cost of the company is Rs. 100,000.

The company has been using borrowed capital amounting to Rs. 500,000 bearing 12% p.a. interest.

Required: ① DCL ② Increase in EBT percentage if sales increases by 15%

[3 + 1]

Ans: ① 3 times ② 45%

10. 2069 Q.No. 5

The following are the information given to you:

Sales	Rs. 300,000
Variable cost	50% of sales
Degree of operating leverage	3

The balance sheet of the company reveals the capital structure of the company as under:

3000 equity shares of Rs. 100 each	Rs. 300,000
10% Debentures of Rs. 100 each	Rs. 100,000

Required: ① Fixed cost ② Degree of financial leverage

[2+2]

Ans: ① Rs. 100,000 ② 1.25 times

11. 2068 (I) Q.No. 5

Following information is given for year ended December 31, last year:

Unit sold:	100,000 units at Rs.10 per unit
Production cost:	Variable cost Rs.6 per unit
Fixed expenses for the period amount to Rs.200,000.	

The capital structure of the company consists of 1000; 10% debentures of Rs.1,000 each.

Required:

a. Degree of operating leverage

b. Degree of financial leverage

[2+2]

Ans: (a) 2 times (b) 2 times

12. 2068 (II) Q.No. 5

The capital structure of a company is as follows:

10% debentures	Rs.1,800,000
8% preference share capital	Rs.2,400,000
Equity share capital of Rs.100 per share	Rs.1,800,000
The company is within 40% tax bracket.	
The earning per share (EPS) is Rs.5	

Required:

① Earning before interest & taxes (EBIT)

② Degree of financial leverage

[2+2]

Ans: ① Rs. 650,000 ② 4.333 times

13. 2067 (I) Q. No. 5

A company's sales is Rs. 100,000 (4000 units @ 25 each). The variable cost per unit is Rs. 10 and fixed cost amounted to Rs. 20,000. The interest on debt of Rs. 100,000 is 10% p.a.

Required: (1) Degree of combined leverage (2) By what percent will EBT increase if sales increase by 10% [2 + 2]

Ans: (1) 2 times (2) 20%

14. 2067 (II) Q. No. 5

A company earned Rs. 80,000 profit on last year's sales revenue of Rs. 850,000. The profit-volume ratio of the company in that year was 40% and interest on borrowed capital was Rs. 30,000.

Required: (1) Degree of operating leverage (2) Degree of financial leverage [2 + 2]

Ans: (1) 3.09 times (2) 1.375 times

15. 2066 Q.No. 5

The relevant information of a firm for the year ended 31st Chaitra, last year were:

Sales	Rs. 4,000,000
Variable cost	Rs. 1,600,000
Fixed cost	Rs. 800,000
Interest on borrowed capital	Rs. 400,000

Required:

- Degree of operating leverage
- Degree of financial leverage

[2 + 2]

Ans: (1) 1.5 times (2) 1.33 times

16. 2065 Q.No. 5

A company's sales is Rs. 80,000. The variable cost is 50% of sales and fixed cost amounted to Rs. 20,000. The interest on debt capital is Rs. 10,000.

Required:

- Degree of combined leverage (DCL)
- By what percent will EBT increase if sales increase by 6%?

[2+2]

Ans: (a) 4 times (b) 24%

17. 2064 Q.No. 5

The following are the extract from the books of account of a company.

Sales	Rs. 300,000
Variable cost	50% of sales
Degree of operating leverage	2

The capital structure of the company is as under:

2,000 Ordinary shares of Rs. 100 each	Rs. 200,000
10% Debentures of Rs. 100 each	Rs. 150,000

Required: (a) Fixed cost (b) Degree of financial leverage

[2+2]

Ans: (a) Rs. 75,000 (b) 1.25 times

18. 2063 Q.No.5

The capital structure of a company is as under:

14% Preference shares	Rs. 1,000,000
Equity shares of Rs. 100 each	Rs. 1,500,000
10% Debentures	Rs. 1,000,000

The corporate tax rate is 30% and EBIT is Rs. 1,400,000.

Required: (i) Degree of financial leverage (ii) Earning per share if EBIT is Rs. 1,500,000. [2+2]

Ans: (i) 1.27 times (ii) Rs. 56

19. 2062 Q.No.5

The EBIT of a company for the last year was Rs. 120,000 and an estimation for the current year was Rs. 132,000. The earning before tax was Rs. 80,000 and Rs. 92,000 respectively.

Required: ① Degree of financial leverage for the first year. ② EBT if EBIT increased upto Rs. 144,000 from Rs. 120,000 [2+3]

Ans: ① 1.5 times ② Required EBT Rs. 104,000

20. 2061 Q.No.7

The Degree of operating leverage of a firm in an accounting year was 2. The sales and fixed cost for the same year were Rs. 600,000 and Rs. 200,000 respectively. The interest on debt capital for the period was Rs. 40,000.

Required: Calculate variable cost and degree of financial leverage. [2+2]

Ans: Amount of variable cost Rs. 2,00,000 and Degree of financial leverage Rs. 1.25

21. 2060 Q.No.6

The relevant information of a firm for the year ended 31st Chaitra, last year were:

Degree of financial leverage	1.25:1
Interest	Rs. 20,000
Fixed cost	Rs. 200,000

Required: Calculate: (a) Earning before tax (b) Earning before interest and tax
(c) Degree of operating leverage [1+1+2]

Ans: (a) Rs. 80,000; (b) Rs. 100,000; (c) 3 times

22. 2059 Q.No.5

The capital structure of a company is as under:

15% preference shares	Rs. 1,000,000
10% debentures	Rs. 500,000
Equity shares of Rs. 100 each	Rs. 1,500,000
Total capital	Rs. 3,000,000

The Degree of financial leverage is 2 and the company is in 25% tax bracket.

Required: Calculate EBIT and EPS.

[2+2]

Ans: Rs. 5,00,000, Rs. 12.50

23. 2058 Q.No.6

The capital structure of a company has been given below:

Equity shares of Rs. 100 each	Rs. 300,000
8% bond of Rs. 50 each	Rs. 100,000
12% preference shares of Rs. 100 each	Rs. 200,000
10% debentures of Rs. 100 each	Rs. 300,000
Tax rate applicable to the company is 50%	
Degree of financial leverage is 3 times	

Required: Earning before interest & taxes (EBIT)

[4]

Ans: Rs. 1,29,000

24. 2057 Q.No.2

The capital structure of a company is as follows:

Equity shares of Rs. 100 each	Rs. 500,000
8% preference shares of Rs. 100 each	200,000
10% debentures of Rs. 100 each	100,000

Degree of financial leverage is 3 and corporate tax is 50%.

Required: Earning before interest & taxes (EBIT).

[4]

Ans: Rs. 83,000

25. 2057 (Cancelled) Q.No.4

The following information is provided.

- Sales of Rs. 600,000,
- Degree of combined leverage is 3 times.
- Degree of financial leverage is 2 times.
- Variable costs is 50 percent of sales.

Required: (a) Fixed cost (b) Interest

[2+2=4]

Ans: a. Rs. 100,000; b. Rs. 100,000

26. 2056 Q.No.6

The capital structure of company is as follows:

Equity share of Rs. 100 each	Rs. 400,000
10% preference share of Rs. 100 each	Rs. 100,000
10% debentures of Rs. 10 each	Rs. 50,000

Degree of financial leverage is 2 and the corporate tax is 50%.

Required: (a) Earning before interest and taxes (b) Earning per share

[2+2]

Ans: a. Rs. 50,000; b. Rs. 3.125

27. 2055 Q.No.2

The following are the extract from the books of account of a company:

Earning before interest and taxes	Rs. 15,000	Variable cost	Rs. 15,000
Preference dividend	Rs. 3,000	Interest	Rs. 5,000
Degree of combined leverage	2	Tax rate	50%
Number of equity shares	1,000		

Required: a. Sales revenue at present b. Earning per share at present

[2+2=4]

Ans: a. Rs. 23,000; b. Rs. 2

Analysis of Alternative Financial Plan [Indifference Point of EBIT]**28. 2071 Q.No.6**

Following information is provided.

Sources of capital	Plan I (Rs.)	Plan II (Rs.)
Equity share of Rs.100	100,000	200,000
6% Debenture	100,000	-
Total	200,000	200,000

Tax rate 40%

Required: Indifference point.

[2]

Ans: Rs. 12,000

29. 2071 Old Q.No.6

Pokhara Company Ltd., has ordinary share capital of Rs.400,000 of Rs.100 each. The company has an expansion programme which requires extra capital of Rs.800,000. The company has two financing plans as follows:

	Financial Plan 1 (Rs.)	Financial Plan 2 (Rs)
Ordinary share of Rs.100 each	500,000	400,000
10 % debentures	300,000	400,000
Total Rs.	800,000	800,000

The corporate tax rate is 25%.

Required: EBIT of two financing plans.

[4]

Ans: Rs. 120,000

30. 2070 Q.No. 6

The Green Company Ltd., has equity share capital of Rs. 1,000,000 of Rs. 100 each. It needs further capital of Rs. 600,000 to increase its present production capacity. For this purpose the company considers the following two financing options:

Option 1: Issue new equity shares at a premium of 20%

Option 2: Issue new bond at 8% interest rate.

Required: Indifference EBIT of two financing options.

[4]

Ans: Rs. 144,000

31. 2069 Q.No. 6

A company is considering the two different plans to finance a new project:

	Plan I	Plan II
Ordinary shares of Rs. 100 each	Rs. 300,000	Rs. 200,000
12% Preference shares of Rs. 100 each	-	Rs. 200,000
10% Debentures of Rs. 100 each	Rs. 200,000	Rs. 100,000
Tax rate 50%		

Required: Indifference point.

[4]

Ans: EBIT = Rs. 134,000

32. 2068 (I) Q.No. 6

The company with 5,000 equity shares capital of Rs.100 each, plan to raise additional capital of Rs.600,000 required for its expansion programme. The company within 50% tax bracket has the following financing plans for raising its needed capital.

Financial Plan	I	II
Issue equity share of Rs.100 each at 20% premium	Rs.600,000	Rs.300,000
Issue of 10% Debentures		300,000

Required: Indifference level of EBIT of these two financing plans

[4]

Ans: Rs. 120,000

33. 2068 (II) Q.No. 6

The Balance Sheet of a company shows the following capital structure:

Rs.900,000 equity share capital divided in shares of Rs.100 each.

Rs.1,200,000 - 6% debentures.

The company accepted a profitable sales offer requiring to raise Rs.937,500 additional finance (capital).

The financing could be accomplished through

- (a) Debt issue carrying 8% coupon rate, or
 (b) by issuing common shares at 25% premium

Company's tax rate is 60 percent.

Required:

- (i) Indifference level of EBIT (ii) Earning per share at indifference level [2+2]
 Ans: (i) Rs. 237,000 (ii) Rs. 4

34. 2067 (I) Q. No. 6

The existing capital of a company is Rs. 500,000; equity shares of Rs. 100 each. Additional finance of Rs. 600,000 is required for an expansion program. The possible financial plans for an expansion are as under:

Plan I	Issue 3,000 equity shares of Rs. 100 each and rest 8% debenture
Plan II	Issue 2,000 equity shares of Rs. 100 each and rest 8% debentures.

Required: Indifference point of EBIT, assuming tax rate of 50%. [4]
 Ans: Rs. 88,000

35. 2067 (II) Q. No. 6

The global company has two alternative financial plans to meet capital requirement of its new project.

	Financial Plant I	Financial Plant II
Equity share capital of Rs. 100 each	250,000	200,000
14% Debentures	250,000	200,000
10% Preference share capital of Rs.100 each	-	100,000

The corporate tax rate is 40%.

Required: Equivalent EBIT of those two financing plans. [4]
 Ans: Rs. 83,333.33

36. 2066 Q.No. 6

A Company is considering the following two different financial plans for financing a new project.

	Financial Plan I	Financial Plan II
Equity shares of Rs. 100 each	Rs. 4,000,000	Rs. 2,000,000
10% Debentures	Rs. 1,000,000	Rs. 3,000,000
12% Preference shares	Rs. 1,000,000	Rs. 1,000,000
Total	Rs. 6,000,000	Rs. 6,000,000

The company is expecting a 50% tax rate.

Required: Determine indifferent EBIT of these two financing plans. [4]
 Ans: Rs. 7,40,000

37. 2065 Q.No. 6

A company at present capitalized with Rs. 500,000 consisting of 5,000 equity shares of Rs. 100 each. Additional finance of Rs. 500,000 is required for an expansion program. Following possible financing plans are under consideration.

- Equity financing by issuing Rs. 100 equity shares.
- 50% through issue of equity shares of Rs. 100 each and 50% through term loan at 12%. The company is under 50% tax rate.

Required: Indifference point of EBIT [4]
 Ans: Rs. 120,000

38. 2064 Q.No. 6

A Company is planning to raise Rs. 1,000,000 to finance a project. The company is considering the following two alternatives financial plans:

	Financial Plan I	Financial Plan II
Equity shares of Rs. 100 each	Rs. 600,000	Rs. 500,000
12% Debentures	Rs. 400,000	Rs. 300,000
10% Preference shares of Rs. 100 each	---	Rs. 200,000

The corporate tax rate is 50%

Required: Calculate the equivalency level (indifference point) of EBIT. [4]
 Ans: Rs. 2,16,000

39. 2063 Q.No.6

A company has the following capital structure:

Equity shares of Rs. 100 each	Rs. 1,500,000
12% Preference share capital	500,000
10% Debentures	500,000

The corporate tax is 25%.

An expansion programme is planned which will require Rs. 1,000,000 and the following financial alternatives are considered:

Alt. 1	Issue equity shares of Rs. 100 each
Alt. 2	Issue 10% Debentures of Rs. 100 each

Required: Indifference level.

[4]

Ans: Rs. 380,000

40. 2062 Q.No.6

A company is considering the following two different financial plans for financing a new project:

	Financial Plan I (Rs.)	Financial Plan II (Rs.)
Equity shares of Rs. 100 each	10,00,000	15,00,000
10% Preference shares of Rs. 100 each	600,000	-
10% Debentures of Rs. 100 each	400,000	500,000
Tax rate 50%		

Required: Indifference point for the alternative financial plans.

Ans: Indifference Point Rs. 380,000

41. 2061 Q.No.6

The existing capital of a company is Rs. 1,000,000 equity shares of Rs. 100 each. The company is planning to expand its assets by Rs. 500,000. All financing will come from external source. The company is expected to have a 25% tax rate. The possible financial plans for an expansion are as under:

Plan A: Issue 3,000 shares of Rs. 100 each and rest 10% debentures.
Plan B: Issue 2,000 shares of Rs. 100 each and rest 10% debentures.

Required: Determine indifference EBIT between these two plans.

[4]

Ans: Rs.150,000

42. 2060 Q.No.5

A company is considering the following two different financial plans to finance its total project cost of Rs. 1,000,000.

	Plan I	Plan II
Equity shares of Rs. 100 each	Rs. 600,000	Rs. 300,000
10% debentures	400,000	300,000
15% preference shares	-	400,000

The corporate tax rate is 25%.

Required: Determine the indifference point between Plan I and II.

[4]

Ans: EBIT Rs. 180,000

43. 2059 Q.No.7

A new company is going to determine appropriate capital structure for its capital requirement of Rs. 2,000,000. It can either issue 10% Debt or 15% Preferred stock or Equity stock of Rs. 100 per share. The company is expected to have a 25% tax rate and EBIT of Rs. 400,000. The following two financial plans are proposed:

Financial Plan I:	Equity stock of Rs. 1,400,000 and rest Debt Capital
Financial Plan II:	Equity stock of Rs. 700,000; Debt capital Rs. 500,000 and rest preference capital.

Required: Determine indifference EBIT and suggest for appropriate capital structure on expected EBIT.

[3+1]

Ans: i. Indifference point (EBIT) Rs.3,60,000 ii. EPS in plan I Rs.18.21, iii. EPS in plan II Rs.20.36 Plan II

44. 2058 Q.No.5

A Well established Ltd. Company has been considering the following financial plans to finance the proposed expansion plan.

Financial Plan	1 st	2 nd
Equity shares of Rs. 100 each	Rs. 800,000	Rs. 600,000
12% preference share capital	200,000	200,000
8% debentures	-	200,000
Total capitalization	R. 1,000,000	Rs. 1,000,000

Tax rate 50%

Required: Indifference point (EBIT) for the two alternative financing plans.

[4]

45. 2057 Q.No.7

A Ltd. Company has been considering following two financing plans for financing new project requiring Rs. 500,000 capital outlay.

Financial Plan	I	II
Equity shares of Rs. 100 each	Rs. 400,000	Rs. 200,000
8% debentures	100,000	300,000
	500,000	Rs. 500,000

The company is within 40% tax bracket.

Required: Indifferent point (EBIT) for two financial plans.

[4]

Ans: Rs. 40,000

46. 2057 (Cancelled) Q.No.5

A Ltd. Company has an expansion plan requiring capital outlay of Rs.400,000. The existing capital of Rs. 600,000 was entirely from Equity shares of Rs. 100 each. The company is within 50% tax bracket. Following two alternative financing plans are available for the company.

	Financial Plan I	Financial Plan II
Equity shares of Rs. 100 each	Rs. 300,000	Rs. 100,000
10% debentures	Rs. 100,000	Rs. 300,000

Required: Indifferent point for two financing plans.

[4]

Ans: Rs. 1,00,000

47. 2056 Q.No.5

A company has been considering the following two different plans to finance its new project.

	Financial Plan I	Financial Plan II
Equity shares of Rs. 100 each	Rs. 250,000	Rs. 125,000
10% debentures	Rs. 125,000
Tax rate	50%	50%

Required: Indifference point

[2+2]

Ans: Rs. 25,000

48. 2055 Q.No.7

The following two financial plans are proposed:

	Financial Plan 1	Financial Plan 2
Equity shares of Rs. 100 each	Rs. 1,500,000	Rs. 1,000,000
10% debentures of Rs. 100 each	Rs. 500,000
Tax rate 50%		

Required:

- Determine the indifference point of the financial plans.
- Earning per share at indifference point.

[3+2 = 5]

Ans: a. Rs. 150,000; b. Rs.5