

Prime Academy
Cost Accounting and Financial Management
Model Test paper

Question Nos **1** and **6** are compulsory. Attempt any **three** questions out of the remaining **2,3,4** and **5** and attempt **two** questions from the remaining question numbers **7,8** and **9**
Working notes should form part of the answer

1a. ABC Ltd providing basic telephone services has three billing structures for three different customers, Low end , Medium end and High end customers. The cost and revenue structure is given below

	Low end	Medium end	High end
Number of subscriber in (000)	1,000	800	300
Cost of attending complaint Rs./complaint	80	50	30
No. of complaints/ subscriber	0.2	0.1	0.08
Billing and accounts Rs./ subscriber	3	8	15
Collection of bills Rs./bill	50	10	5
Cost of installation / subscriber Rs./subscriber	150	200	800
Monthly rental Rs./ subscriber	200	150	Nil
Average calls per month - Nos	250	500	1,500
Free calls allowed/month/customer - Nos	Nil	100	300
Revenue per call - Rs.	2	4	6

Work out the net revenue from each category of customer and comment (12 marks)

1b. Differentiate between job costing and Batch costing (3 marks)

1c. Distinguish between bin card and stores ledger (3 marks)

2.From the following information about JV company Ltd during a period, prepare process cost account for process III

Opening stock in process III	1,600 units valued at Rs. 20,600
Transfer from process II	42,400 units valued at Rs.3,29,200
Transfer to process IV	38,400 units
Closing stock of process III	4,000 units
Units scrapped	1,600 units
Direct material added in process III	Rs.1,58,080
Direct wages	78,080
Production overhead	39,040
Degree of completion	

	Opg.Stock	Closing stock	Scrap
Material	80%	70%	100%
Labour	60%	50%	70%
Overhead	60%	50%	70%

The normal loss in the process was 5% of production and scrap was sold at Rs.3 per unit.
(14 marks)

3a. A manufacturing company has an installed capacity of Rs.1,20,000 units per annum. The cost structure of the product is as under:

	Rs.
Variable cost per unit	
Materials	8
Labour (subject to a minimum of Rs.56,000 per month)	8
Overheads	3

Fixed overheads Rs.1,68,750 per annum

Semi variable overheads - Rs.48,000 per annum at 60% capacity, which increases by Rs.6,000 per annum for increase of every 10% of the capacity utilization or any part thereof, for the year as a whole.

The capacity utilization is expected for next year is estimated at 60% for two months, 75% for six months and 80% for the remaining part of the year. If the company is planning to have a profit of 25% on selling price, calculate the selling price per unit assuming that there are no opening and closing stock. (10 marks)

3b. What are the conditions that favour the adoption of last in first out system of material pricing and indicate its advantages (4 marks)

4a. The data given relates to Gaurav theatre for the year ending 31.12.2006

Salaries

1 manager	Rs.30,000 per month	Carbon	- Rs.5,72,350
10 gate keepers	Rs. 5,000 per month	Misc.exp	- Rs. 3,15,420
2 operators	Rs. 8,000 per month	Advertisement	- Rs.5,84,510
4 clerks	Rs. 12,000 per month	Administration expenses	Rs.8,25,000
Hire of print	Rs.15,40,700.	Electricity & Oil	Rs.12,20,000

The premises is valued at Rs.6,00,00,000 and estimated life is 15 years. Projector and other equipment cost Rs.38,20,000 on which 10% depreciation is to be charged.

Daily three shows are run throughout the year. The total capacity is 625 seats which is divided into three classes as follows.

Janata class	- 225 seats
Premium class	- 125 seats
Kings circle	- 50 seats

Ascertain the cost per man show assuming that a) 20% of the seats remain vacant and b) Weightage to be given to three classes in the ration 1:2:3. Determine the rates for each class if the management expects 30% return on gross proceeds. Ignore entertainment tax. (10 marks)

4b. Enumerate the factors which are to be considered before installing a system of cost accounting in a manufacturing organization (4 marks)

5a. A company has three production departments and two service departments and the following details relating too overheads analysed to production and service departments is given.

		Rs.
Production Department	A	48,000
	B	42,000
	C	30,000
Service department	X	14,040

Y 18,000

The expenses of service department are apportioned as follows:

	Prod'n. Departments			Service Departments	
	A	B	C	X	Y
Service Dept X	20%	40%	30%		10%
Service Dept Y	40%	20%	20%	20%	

Allocate service department costs to production departments using the simultaneous equation method (7 marks)

5b. The Costing profit and loss account and reconciliation statement is given. Prepare Manufacturing Trading and profit and loss account.

Opening raw materials	51,616	
Add: Purchases	1,99,334	
Less: Closing stock	47,804	
Raw material consumed		2,03,146
Direct wages		80,072
Production overhead		1,90,680
Add: Opening Work in progress		24,146
Less: Closing Work in progress		<u>(24,020)</u>
Factory cost		4,74,024
Administration costs		53,058
Add: opening stock of finished goods		63,238
Less: Closing stock of finished goods		<u>(65,020)</u>
Cost of goods produced		5,25,300
Sales		<u>6,25,600</u>
Profit as per cost records		1,00,300

Reconciliation statement		
Profit as per cost records		1,00,300
Add: Discount received		1,790
Difference in stock valuation		
Opening Raw material	320	
Closing finished goods	682	<u>1,002</u>
		1,03,092
Less: Interest		2,000
Discount		2,964
Distribution costs		16,926
Selling costs		30,562
Difference in stock valuation		
Opening work in progress	350	
Opening finished goods	652	
Closing Raw material	422	
Closing work in progress	<u>296</u>	<u>1,720</u>
Profit as per financial books		<u>48,920</u>

(7 marks)

6. Major corporation is exploring the idea of replacing its existing machine and the relevant details are given below.

Existing machine

Purchased 2 years ago

Remaining life - 6 years

Salvage value - Rs.500

Depreciation on straight line basis

Current book value – Rs.2,600 and its realizable market value – Rs.3,000

Annual depreciation – Rs.350

Replacement machine

Capital cost -Rs.8,000

Estimated useful life – 6 years

Estimated salvage value – Rs.800

The replacement machine would permit an output expansion. As a result sales is expected to rise by Rs.1,000 per year, operating expenses would decline by Rs.1,500 per year. It would require an additional inventory of Rs.2,000 and would cause an increase in accounts payable by Rs.500. Assuming a corporate tax of 40% and cost of capital of 15 %, advise the company. PV factor at 15%

Year	1	2	3	4	5	6	
	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	(12 marks)

6b. Discuss the need for social cost benefit analysis (4 marks)

7. The following figures of Srishti Ltd are presented

Earnings before interest and tax		Rs.23,00,000
Less: Debenture interest @ 8%	80,000	
Long term loan interest@11%	2,20,000	<u>3,00,000</u>
		20,00,000
Less: Income tax		<u>10,00,000</u>
Earnings after tax		10,00,000
No.of equity shares of Rs.10 each		5,00,000
EPS	Rs. 2	
Market price of share	Rs.20	
P/E Ratio	10	

The company has undistributed reserves and surplus of Rs.20 lakhs. It needs Rs.30 lakhs to pay off debentures and modernize its plants. It seeks your advice on the following alternative modes of raising finance.

Alternative -1 – Raising entire amount as term loan from banks @ 12%

Alternative – 2 – Raising part of funds by issue of 1,00,000 shares of Rs.20 each and the rest as term loan at 12%

The company expects to improve its rate of return by 2 % as a result of modernization, but P/E ratio is likely to go down to 8 if the entire amount is raised as term loan.

(i) Advise the company on the financial plan to be selected

(ii) If it is assumed that there will be no change in the P/E ratio if either of the two alternatives are adopted, would your advice still hold good? (12 marks)

8a. Y Ltd sells goods at a gross profit of 20%. It includes depreciation as part of cost of production. The following figures for the 12 month ending 31st December '2006 are given. Calculate the requirements of working capital of the company on a cash cost basis.

Assume (i) a safety margin of 15% will be maintained

(ii) cash is to be held to the extent of 50% of current liabilities

(iii) there will be no work in progress

(iv) tax is to ignored.

Stock of raw materials and finished goods are kept at one month's requirements

Sales at 2 months credit	Rs.27,00,000
--------------------------	--------------

Materials consumed (suppliers credit is for 2 months)	6,75,000
---	----------

Wages paid at the beginning of next month	5,40,000
---	----------

Manufacturing expenses outstanding at the end of the year

(cash expenses are paid one month in arrear)	60,000
---	--------

Total administrative expenses (paid as above)	1,80,000
---	----------

Sales promotion expenses - paid quarterly in advance	90,000
--	--------

(10 marks)

8b. Outline the methods and tools of financial management

(2marks)

9a.. Following information are available books of account of NPQ Ltd

Sales for the year	Rs.10,00,000
--------------------	--------------

Gross profit rate	30%
-------------------	-----

Stock turnover ratio	5
----------------------	---

Collection period for debts	30 days
-----------------------------	---------

It is proposed to enter an entirely new market with a product which has not been handled before. This will lead to an additional annual sales of rs.2,00,000 having a gross profit rate of 20%. Customers will expect 60 days credit and additional stock of raw materials equal to 3 months usage will be needed. Raw material costs, on existing products as with the new product account for 75% of cost of sales. If proposal is implemented, how will it affect company's key ratios of Stock Turn over ratio and Debt collection period?

(6 marks)

9b. Write short notes on any two

(i) Bridge loan

(ii) Packing credit

(iii) Venture Capital Financing

(2x3 = 6 marks)

(Question and answers)

Prime Academy
Cost Accounting and Financial Management
Model Test paper

Question Nos **1** and **6** are compulsory. Attempt any **three** questions out of the remaining **2,3,4** and **5** and attempt **two** questions from the remaining question numbers **7,8** and **9**

Working notes should form part of the answer

1a. ABC Ltd providing basic telephone services has three billing structures for three different customers, Low end , Medium end and High end customers. The cost and revenue structure is given below

	Low end	Medium end	High end
Number of subscriber in (000)	1,000	800	300
Cost of attending complaint Rs./complaint	80	50	30
No. of complaints/ subscriber	0.2	0.1	0.08
Billing and accounts Rs./ subscriber	3	8	15
Collection of bills Rs./bill	50	10	5
Cost of installation / subscriber Rs./subscriber	150	200	800
Monthly rental Rs./ subscriber	200	150	Nil
Average calls per month - Nos	250	500	1,500
Free calls allowed/month/customer - Nos	Nil	100	300
Revenue per call - Rs.	2	4	6

Work out the net revenue from each category of customer and comment (12 marks)

Answer:

	Low end	Medium end	High end
Number of subscriber in	10,00,000	8,00,000	3,00,000
Chargeable calls	10 lakhx250	8lakhx400	3 lakhx1,200
	(Rs'000)	(Rs'000)	(Rs'000)
Revenue(Rs,000)	5,00,000	12,80,000	21,60,000
Rental	2,00,000	1,20,000	-
Total	7,00,000	14,00,000	21,60,000
Cost of attending complaints	16,000	4,000	720
Billing and accounts	3,000	6,400	4,500
Collection of bills	50,000	8,000	1,500
Cost of installation	1,50,000	1,60,000	2,40,000
Total costs	2,19,000	1,78,400	2,46,720
Net revenue	4,81,000	12,21,600	19,13,280
Net revenue/customer – Rs	481	1527	6,378

The net revenue per customer is highest in the case of High end customers and it is also more profitable. The company should focus on high end customers by promotional schemes to attract more customers in this category.

1b. Differentiate between job costing and Batch costing (3 marks)

1c. Distinguish between bin card and stores ledger (3 marks)

2. From the following information about JV company Ltd during a period, prepare process cost account for process III

Opening stock in process III 1,600 units valued at Rs. 20,600

Transfer from process II 42,400 units valued at Rs.3,29,200

Transfer to process IV 38,400 units

Closing stock of process III 4,000 units

Units scrapped 1,600 units

Direct material added in process III Rs.1,58,080

Direct wages 78,080

Production overhead 39,040

Degree of completion

	Opg.Stock	Closing stock	Scrap
Material	80%	70%	100%
Labour	60%	50%	70%
Overhead	60%	50%	70%

The normal loss in the process was 5% of production and scrap was sold at Rs.3 per unit. (14 marks)

Answer:

Statement of Equivalent Production									
Input		Output		Equivalent Production					
Item	Units	Item	Units	Material A		Material B		Labour & OH	
				Units	%	Units	%	Units	%
Op.stock	1,600	Normal loss	2000						
Process II		Completed							
Transfer	42,400	(a) Work on op WIP	1,600			320	20	640	40
		(b) Introduced &							
		Completed	36,800	36,800	100	36,800	100	36,800	100
		Cl.WIP	4,000	4,000	100	2,800	70	2,000	50
		Less: Abn. Gain	400	400	100	400	100	400	100
	44,000		44,000	40,400		39,520		39,040	

Statement of cost for each element			
Elements of cost	Cost Rs.	Equivalent Prodn.(units)	Cost per unit Rs.
Material A			
Transfer from previous	Rs.3,29,200		
Less: Value of normal scrap	6,000	3,23,200	40,400
			8

Material B

Added in process III	1,58,080	39,520	4
Labour	78,080	39,040	2
Overhead	39,040	39,040	1
Total Cost	5,98,400		

Statement of apportionment of cost

Items	Elements	Equivalent Prodn.(units)	Cost/unit Rs.	Cost Rs.	Total Rs.
Opening WIP (For completion)	Material A		8		
	Material B	320	4	1,280	
	Wages	640	2	1,280	
	Overhead	640	1	<u>640</u>	3,200
Introduced & Completed during The period	Material A	36,800	8	2,94,400	
	Material B	36,800	4	1,47,200	
	Wages	36,800	2	73,600	
	Overhead	36,800	1	<u>36,800</u>	5,52,000
Closinh WIP	Material A	4,000	8	32,000	
	Material B	2,800	4	11,200	
	Wages	2,000	2	4000	
	Overhead	2,000	1	<u>2,000</u>	49,200
Abnormal gain	Material A	400	8	3,200	
	Material B	400	4	1,600	
	Wages	400	2	800	
	Overhead	400	1	<u>400</u>	<u>6,000</u>
					5,98,400

Process III

Details	Units	Amount	Details	Units	Amount
To balanceb/d	1,600	20,600	By Normal loss	2,000	6,000
To Process II A/c	42,400	3,92,200	By process IV A/c	38,400	5,75,800
By Direct Materials		1,58,080	By Closing stock c/d	4,000	49,200
By labour		78,080			
By Overheads		39,040			
By abnormal gain	400	6,000			
	<u>44,400</u>	<u>6,31,000</u>		<u>44,400</u>	<u>6,31,000</u>

Abnormal gain A/c

	Units	Amount	Units	Amount
To process III Scrap	400	1,200	400	6,000
To profit & loss A/c		4,800		
		<u>6,000</u>		

3a. A manufacturing company has an installed capacity of Rs.1,20,000 units per annum. The cost structure of the product is as under:

	Rs.
Variable cost per unit	
Materials	8
Labour (subject to a minimum of Rs.56,000 per month)	8
Overheads	3

Fixed overheads Rs.1,68,750 per annum

Semi variable overheads - Rs.48,000 per annum at 60% capacity, which increases by Rs.6,000 per annum for increase of every 10% of the capacity utilization or any part thereof, for the year as a whole.

The capacity utilization is expected for next year is estimated at 60% for two months, 75% for six months and 80% for the remaining part of the year. If the company is planning to have a profit of 25% on selling price, calculate the selling price per unit assuming that there are no opening and closing stock. (10 marks)

Answer:

Capacity Utilisation	60%	75%	80%	74.16
No.of months	2	6	4	
Production/month	6,000	7,500	8,000	
Total Prodn.	12,000	45,000	32,000	89,000
	Rs.	Rs.	Rs.	Rs.
Material	96,000	3,60,000	2,56,000	7,12,000
Wages	1,12,000	3,60,000	2,56,000	7,28,000
Overheads	36,000	1,35,000	96,000	2,67,000
Semivariable overheads				60,000
Fixed overheads				<u>1,68,750</u>
Total				19,35,750
Profit 25% on SP or 1/3 rd on cost				<u>6,45,250</u>
Total				25,81,000
Selling price per unit	$25,81,000 \div 89,000 = \text{Rs.29 per unit}$			

3b. What are the conditions that favour the adoption of last in first out system of material pricing and indicate its advantages (4 marks)

4a. The data given relates to Gaurav theatre for the year ending 31.12.2006

Salaries

1 manager	Rs.30,000 per month	Carbon	- Rs.5,72,350
10 gate keepers	Rs. 5,000 per month	Misc.exp	- Rs. 3,15,420
2 operators	Rs. 8,000 per month	Advertisement	- Rs.5,84,510
4 clerks	Rs. 12,000 per month	Administration expenses	Rs.8,25,000
Hire of print	Rs.15,40,700.	Electricity & Oil	Rs.12,20,000

The premises is valued at Rs.6,00,00,000 and estimated life is 15 years. Projector and other equipment cost Rs.38,20,000 on which 10% depreciation is to be charged.

Daily three shows are run throughout the year. The total capacity is 625 seats which is divided into three classes as follows.

Janata class - 225 seats

Premium class - 125 seats

Kings circle - 50 seats

Ascertain the cost per man show assuming that a) 20% of the seats remain vacant and b) Weightage to be given to three classes in the ration 1:2:3. Determine the rates for each class if the management expects 30% return on gross proceeds. Ignore entertainment tax.

(10 marks)

Answer:

Operating Cost Sheet

Fixed cost

Salaries	Rs.
Manager	30,000
Gate keepers Rs.5,000 x 10	50,000
Operators Rs. 8,000 x 2	16,000
Clerks Rs.12,000 x 4	48,000
Administration Expenses	8,25,000

Depreciation

Premises Rs.6,00,00,000 ÷ 15	40,00,000
Projector & other equipments 38,20,000 x 0.10	3,82,000

Total Fixed Cost 53,51,000

Variable costs

Electricity & Oil	12,20,000
Carbon	5,72,350
Misc.expenses	3,15,420
Advertisements	5,84,510
Hire of print	<u>15,40,700</u>

Total variable cost 42,32,980

Total Cost 95,83,980

Add:30% return on gross proceeds or 3/7 of cost 41,07,420

Gross proceed 1,36,91,400

Total man show 5,47,500

Cost per man show Rs.25

Rate for each class

Janata class - Rs.25

Premium class 25x2 - Rs.50

Kings circle - 25x3 - Rs.75

Workings

No.of seats with weightage

Janata class - 225 seats x 1	= 225
Premium class - 125 seats x 2	= 250
Kings circle - 50 seats x 3	<u>= 150</u>
	625

No of shows = 3

Total weighted seats = 625 x 3 = 1,875

Vacant 20% = 375
 Seats per day = 1,500
 Man show per annum = 1,500 x 365 = 5,47,500
 30 % return on gross proceeds Gross Proceeds = 100
 Return 30% = 30
 Cost = 70

In relation to cost it is 3/7

4b. Enumerate the factors which are to be considered before installing a system of cost accounting in a manufacturing organization (4 marks)

5a. A company has three production departments and two service departments and the following details relating too overheads analysed to production and service departments is given.

		Rs.
Production Department	A	48,000
	B	42,000
	C	30,000
Service department	X	14,040
	Y	18,000

The expenses of service department are apportioned as follows:

	Prodn.Departments			Service Departments	
	A	B	C	X	Y
Service Dept X	20%	40%	30%		10%
Service Dept Y	40%	20%	20%	20%	

Allocate service department costs to production departments using the simultaneous equation method (7 marks)

Answer:

$$\begin{aligned}
 X &= 14,040 + 0.2 Y \\
 X - 0.2 Y &= 14,040 \quad \text{-----1}
 \end{aligned}$$

$$\begin{aligned}
 Y &= 18,000 + 0.1 X \\
 -0.1 X + Y &= 18,000 \quad \text{-----2} \\
 2 \times 10 \quad -X + 10Y &= 1,80,000 \\
 X - 0.2Y &= 14,040 \\
 \text{Adding} \quad 9.8Y &= 1,94,040 \\
 Y &= 1,94,040/9.8 = 19,800 \\
 X - 0.2 \times 19,800 &= 14,040 \\
 X &= 14,040 + 3,960 = 18,000
 \end{aligned}$$

	Prodn.Departments			Service Departments	
	A	B	C	X	Y
	Rs.	Rs.	Rs.	Rs.	Rs.
	48,000	42,000	30,000	18,000	19,800
X Dept	3,600	7,200	5,400	(18,000)	
Y Dept	7,920	3,960	3,960		(19,800)

59,520 53,160 39,360

5b. The Costing profit and loss account and reconciliation statement is given. Prepare Manufacturing Trading and profit and loss account.

Opening raw materials	51,616	
Add: Purchases	1,99,334	
Less: Closing stock	47,804	
Raw material consumed		2,03,146
Direct wages		80,072
Production overhead		1,90,680
Add: Opening Work in progress		24,146
Less: Closing Work in progress		<u>(24,020)</u>
Factory cost		4,74,024
Administration costs		53,058
Add: opening stock of finished goods		63,238
Less: Closing stock of finished goods		<u>(65,020)</u>
Cost of goods produced		5,25,300
Sales		<u>6,25,600</u>
Profit as per cost records		1,00,300

Reconciliation statement

Profit as per cost records	1,00,300	
Add: Discount received	1,790	
Difference in stock valuation		
Opening Raw material	320	
Closing finished goods	682	<u>1,002</u>
		1,03,092
Less: Interest	2,000	
Discount	2,964	
Distribution costs	16,926	
Selling costs	30,562	
Difference in stock valuation		
Opening work in progress	350	
Opening finished goods	652	
Closing Raw material	422	
Closing work in progress	<u>296</u>	<u>1,720</u>
Profit as per financial books		<u>48,920</u>

(7 marks)

Answer:

Manufacturing Trading and profit and loss account.

	Rs.		Rs.
Raw materials consumed		By sales	6,25,600
Opening stock	51,296	By Closing stock	
Purchases	1,99,334	Work in progress	23,724
Less: Closing stock	<u>(47,382)</u>	Finished goods	65,702
Direct wages	80,072		89,426

Production overheads	1,90,680	
Opening Work in progress	24,496	
Opening Finished goods	63,890	
Gross Profit	<u>1,52,640</u>	
	7,15,026	<u>7,15,026</u>
To Administration costs	53,058	By Grofit b/d 1,52,640
To Discount	2,964	By discount 1,790
To interest	2,000	
To distribution cost	16,926	
To selling costs	30,562	
To Net profit	<u>48,920</u>	
	<u>1,54,430</u>	<u>1,54,430</u>

6. Major corporation is exploring the idea of replacing its existing machine and the relevant details are given below.

Existing machine

Purchased 2 years ago

Remaining life - 6 years

Salvage value - Rs.500

Depreciation on straight line basis

Current book value – Rs.2,600 and its realizable market value – Rs.3,000

Annual depreciation – Rs.350

Replacement machine

Capital cost -Rs.8,000

Estimated useful life – 6 years

Estimated salvage value – Rs.800

The replacement machine would permit an output expansion. As a result sales is expected to rise by Rs.1,000 per year, operating expenses would decline by Rs.1,500 per year. It would require an additional inventory of Rs.2,000 and would cause an increase in accounts payable by Rs.500. Assuming a corporate tax of 40% and cost of capital of 15 %, advise the company. PV factor at 15%

Year	1	2	3	4	5	6	
	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	(12 marks)

Answer:

Investment in new machine

Cost of new machine 8,000

Less : sales price 3,000

Income tax 40 % on profit on sale of Rs.400 160 2,840

5,160

Add: Additional working capital

Inventory - 2,000

Less: Accounts payable 500 1,500

Net cash out go 6,660

Cash inflow every year	Rs.						
Sales	1,000						
Savings in expenses	<u>1,500</u>						
	2,500						
Less: Income tax on 2,500	<u>1,000</u>						
Net cash inflow	1,500						
Depreciation benefit							
Depreciation on new machine	- Rs.1,200						
Depreciation on existing machine	<u>350</u>						
Increase in depreciation	850						
Tax benefit @ 40%	Rs.340						
Cash flow							
Year	0	1	2	3	4	5	6
Initial investment	(6,660)						
Incremental revenue		1,500	1,500	1,500	1,500	1,500	1,500
Depreciation benefit		340	340	340	340	340	340
Recovery of Wor.Cap							1,500
Salvage of new m/c							
Rs.800 – Tax of Rs.320							480
Salvage value of old m/c							<u>(500)</u>
	(6,660)	1,840	1,840	1,840	1,840	1,840	3,320
Present value	(6,660)	1,600	1,391	1,210	1,052	915	1,435
Net present value = (6,660) + 7,603 = Rs.943							

Since NPV of the proposal is positive the company may opt for replacement of the existing machine.

6b. Discuss the need for social cost benefit analysis

(4 marks)

7. The following figures of Srishti Ltd are presented

Earnings before interest and tax	Rs.23,00,000
Less: Debenture interest @ 8%	80,000
Long term loan interest@11%	2,20,000
	<u>3,00,000</u>
	20,00,000
Less: Income tax	<u>10,00,000</u>
Earnings after tax	10,00,000
No.of equity shares of Rs.10 each	5,00,000
EPS	Rs. 2
Market price of share	Rs.20
P/E Ratio	10

The company has undistributed reserves and surplus of Rs.20 lakhs. It needs Rs.30 lakhs to pay off debentures and modernize its plants. It seeks your advice on the following alternative modes of raising finance.

Alternative -1 – Raising entire amount as term loan from banks @ 12%

Alternative – 2 – Raising part of funds by issue of 1,00,000 shares of Rs.20 each and the rest as term loan at 12%

The company expects to improve its rate of return by 2 % as a result of modernization, but P/E ratio is likely to go down to 8 if the entire amount is raised as term loan.

- (i) Advise the company on the financial plan to be selected
- (ii) If it is assumed that there will be no change in the P/E ratio if either of the two alternatives are adopted, would your advice still hold good? (12 marks)

Answer:

Total Capital employed before modernization

Equity	Rs.50,00,000
Debentures $80,000/8 \times 100$	10,00,000
Reserves & Surplus	20,00,000
Term loan $2,20,000/11 \times 100$	20,00,000
	Rs.1,00,00,000

$$\text{Rate of return} = (23,00,000/1,00,00,000) \times 100 = 23\%$$

$$\text{Rate of return after modernization} = 23 + 2 = 25\%$$

$$\text{Total capital after modernization} = 1,00,00,000 + 30,00,000 - 10,00,000 = \text{Rs.1,20,00,000}$$

Alternative - 1

Return 25% of Rs.1,20,00,000	= 30,00,000
Less: Interest on 20 lakhs @11%	2,20,000
Interest on Rs.10 lakhs @12%	<u>1,20,000</u>
	24,20,000
Income tax	<u>12,10,000</u>
Earnings after interest and tax	12,10,000
EPS = $12,10,000/5,00,000$	= Rs.2.42
PE ratio	= 8
Market price = $\text{Rs.8} \times \text{Rs.2.42}$	= Rs.19.36

Alternative - 2

Return 25% of Rs.1,20,00,000	= 30,00,000
Less: Interest on 20 lakhs @11%	2,20,000
Interest on Rs.10 lakhs @12%	<u>1,20,000</u>
	26,60,000
Income tax	<u>13,30,000</u>
Earnings after interest and tax	13,30,000
EPS = $13,30,000/6,00,000$	= Rs.2.217
PE ratio	= 10
Market price = $10 \times \text{Rs.2.217}$	= Rs.22.17

Since the market price of equity share increases under alternative 2, company should opt for the 2nd alternative.

If PE ratio does not change in either of the alternatives, then market price in alternative 1 = $10 \times \text{Rs.2.42} = \text{Rs.24.20}$

If PE ratio does not undergo any change then, alternative 1 is recommended.

8a. Y Ltd sells goods at a gross profit of 20%. It includes depreciation as part of cost of production. The following figures for the 12 month ending 31st December '2006 are given. Calculate the requirements of working capital of the company on a cash cost basis.

Assume (i) a safety margin of 15% will be maintained

(ii) cash is to be held to the extent of 50% of current liabilities

(iii) there will be no work in progress

(iv) tax is to ignored.

Stock of raw materials and finished goods are kept at one month's requirements

Sales at 2 months credit Rs.27,00,000

Materials consumed (suppliers credit is for 2 months) 6,75,000

Wages paid at the beginning of next month 5,40,000

Manufacturing expenses outstanding at the end of the year

(cash expenses are paid one month in arrear) 60,000

Total administrative expenses (paid as above) 1,80,000

Sales promotion expenses - paid quarterly in advance 90,000

(10 marks)

Answer:

Working notes	Rs.
Sales	27,00,000
Gross margin @ 20%	5,40,000
Cost of sales	21,60,000
Less: Manufacturing cost	
Raw materials 6,75,000	
Wages <u>5,40,000</u>	<u>12,15,000</u>
Total manufacturing expense	9,45,000
Manufacturing in cash	
60,000x12	<u>7,20,000</u>
Depreciation	2,25,000
Total cash cost of sales	21,60,000
Less: Depreciation	<u>2,25,000</u>
	19,35,000
Add: Admn Expenses	1,80,000
Sales promotion expenses <u>90,000</u>	<u>90,000</u>
	22,05,000

Working capital requirements

Debtors @ 2 months (22,05,000/12)x2	= 3,67,500
Raw materials 6,75,000/12	56,250
Finished goods 19,35,000/12	1,61,250
Sales promotion expenses 90,000/4	22,500
Cash on hand 50% of Rs.2,32,500	<u>1,16,250</u>
	7,23,750

Less : Current liabilities

Sundry creditors (6,75,000/12)x2	1,12,500
Admn.expenses (1,80,000/12)	15,000
Wages 5,40,000 / 12	45,000

Manufacturing expenses	<u>60,000</u>	<u>2,32,500</u>
Working capital		4,91,250
Add: margin @ 15%		<u>73,688</u>
Working capital required on cash cost basis		5,64,938

8b. Outline the methods and tools of financial management (2marks)

9a.. Following information are available books of account of NPQ Ltd

Sales for the year	Rs.10,00,000
Gross profit rate	30%
Stock turnover ratio	5
Collection period for debts	30 days

It is proposed to enter an entirely new market with a product which has not been handled before. This will lead to an additional annual sales of rs.2,00,000 having a gross profit rate of 20%. Customers will expect 60 days credit and additional stock of raw materials equal to 3 months usage will be needed. Raw material costs, on existing products as with the new product account for 75% of cost of sales. If proposal is implemented, how will it affect company's key ratios of Stock Turn over ratio and Debt collection period?

(6 marks)

Answer:

Particulars	Current Rs.	Proposed additional Rs.	Projected Rs.
Sales	10,00,000	2,00,000	12,00,000
Cost of sales	<u>7,00,000</u>	<u>1,60,000</u>	<u>8,60,000</u>
Gross profit	3,00,000	40,000	3,40,000
Gross profit ratio	30%	20%	28.33%

Current stock = $(1/5) \times 75\% \times 7,00,000 = \text{Rs.} 1,05,000$

Proposed addition = $(1/4) \times 75\% \times 1,60,000 = \text{Rs. } 30,000$

Projected Total stock = Rs. 1,35,000

Projected Stock turnover ratio = $(75\% \text{ of Rs.} 8,60,000) \div 1,35,000 = 4.78$

Current Debtors = $\text{Rs.} 10,00,000 \times 1/12 = \text{Rs.} 83,333$

Proposed additional debtors = $\text{Rs.} 2,00,000 \times (2/12) = \underline{33,334}$

Total projected Total debtors = Rs. 1,16,667

Debt collection period = $(1,16,667 / 12,00,000) \times 365 = 35 \text{ days}$

9b. Write short notes on any two

- (iv) Bridge loan
- (v) Packing credit
- (vi) Venture Capital Financing

(2x3 = 6 marks)