Detailed Analysis of Cost Fm Nov'13 Question Paper
100% Coverage from CA Namit Arora Sir's Book and Concept Register

QN	Chapter and Concept Name	C / F	N / T	Namit Arora Sir's Analysis	M
1 (a)	Materials EOQ and Level Setting	C	N	Normal question, we have many question of such type in the book (Volume I; QN 25 and QN 27; page no 1.21). Basically this question is the combination of EOQ and Stock Levels with Safety Stock and Average Consumption. Similar questions had been asked in examinations many times, in this attempt institute asked it with minor modification.	5
1 (b)	Cost Records Journal Entries	C	N	Normal question, same journal entries as we noted in concept register and in book it is Volume I QN 2; page no 13.12. Generally students are focused in ledger A/c. This time institute asked to prepare very basic journal entries as it asked in Nov, 2007.	5
1 (c)	Leverage	F	N	Normal question of calculation of various types of Leverages; same as QN 3; page no 2.2 of book Volume II.	5
1 (d)	EBIT-EPS Indifference Point	F	N	Normal question of Indifference Point. This question is same as example noted in concept register i.e. example of indifference point in case of preference share capital. In this question EBIT at indifference point is given and students are asked to calculate dividend on preference capital and then rate on dividend.	5
2 (a)	Operating Costing Transportation	C	N	Normal question of Transport Service. Same as QN 3; page no 7.2 of book Volume I. Institute again asked question on transport service (Road transport service through Bus). We have both cost units in this service i.e. cost unit (cost per km) and composite cost unit (cost per passenger-km). Institute focused in this question only at composite unit.	8
2 (b)	Ratio Analysis Preparation of Balance Sheet	F	N	Normal question of Ratio Analysis. We have many questions of same type in chapter 1 from QN 22 to Q 32 and also PYQ of book Volume II. Generally institute asked question from ratio analysis of preparation of income statement and balance sheet. This time it asked question of preparation of balance sheet on the basis of given ratios.	8
3 (a)	Labour Labour Turnover	C	N	Normal question of labour chapter based on Rate of Labour Turnover. Same as QN 31; page no 2.14 of book Volume I.	8

				Institute already asked the same question in Nov'12. This time same question is asked with minor modifications.	
3 (b)	Capital Budgeting Unequal Life	F	N	Normal question of selection of machine having Unequal Life. Same question as noted in concept register and in book we have more than one question in Chapter 7 like QN 15 of Volume II. Institute asked the similar question in May' 09, May'10, Nov'10 all these questions are covered in PYQ of Chapter 7. Institute asked this question with ignoring taxation. Hence, depreciation is ir-relevant in these questions but in any upcoming attempt Institute may ask the same question with taxation that time this question will be more complicated than existing questions.	8
4 (a)	Standard Costing All Cost Variances	C	N	Normal question of Standard Costing. Same as QN 1; page no 11.17 of book Volume I. In this question Institute asked all cost variances. Institute wants to check the basic knowledge of student on all cost variances instead of depth knowledge of any specific element. Hence, Institute didn't ask any mix variance etc.	8
4 (b)	Cash Flow & Fund Flow Fund Flow	F	N	Normal question of Fund Flow Statement. Same as Example no 1 in concept register and we have many questions in chapter 10 of book Volume II. In this question adjustments are very few. If student has basic knowledge of fund flow then he can solve it very easily. In this question Institute again give corporate dividend tax in adjustments as it had been given in question 2(a) in May'13 (Question of Cash flow statement).	8
5 (a)(i)	Process Costing Equivalent Production	C	T	Explanation on Equivalent Production as it noted in concept register and also in Book Volume III. Theoretical question related to practical area.	2
5 (a)(ii)	Process Costing Inter-process Profit	C	T	Explanation on Inter-process Profit as it noted in concept register and also in Book Volume III. Theoretical question related to practical area.	2
5 (b)	Marginal Costing Use of Marginal Costing	C	T	Institute asked practical application of Marginal Costing. It noted in concept register and also in Book Volume III. Theoretical question related to practical area.	4
5 (c)	Cash Management Virtual Banking	F	T	Meaning of Virtual Banking and its advantages are asked by the Institute covered in Book Volume III. Core theoretical question.	4
5 (d)	Capital Structure Over Capitalization	F	T	Meaning of Overcapitalization and its Causes and Consequences covered in Book Volume III. Core theoretical question.	4
6 (a)	Overhead Machine Hour	C	N	Normal question of Machine Hour Rate. We have many similar questions of MHR in book; like QN 22 to QN 25 of	8

	Rate			Volume I. Institute asked very normal question on machine hour rate having very less adjustments.	
6 (b)	Management of Receivables Evaluation of Credit Policies	F	N	Normal question of Management of Receivables; Selection of Credit Policy, same as example no 1 in concept register and in book it is Chapter 5; QN 2 of Volume II. Institute again asked normal question of selection of credit policy. In this question debtors turnover ratio is given instead of credit allowed to debtors. Hence, student has to calculate credit period first.	8
7 (a)	Marginal Costing Margin of Safety	C	T	Meaning of MOS covered in concept register and relation of Operating Leverage and MOS. Theoretical question related to practical area.	4
7 (b)	Budgetary Control	C	T	Steps involved in Budgetary Control Technique. This concept is covered in concept register and in book Volume III. Theoretical question related to practical area.	4
7 (c)	Cash Management Marketable Securities	F	T	Question on Marketable Securities. Covered in concept register and in book Volume III. Theoretical question related to practical area.	4
7 (d)	Capital Structure	F	T	Very basic question. Meaning of capital Structure and its significance. Covered in concept register and book Volume III. Theoretical question related to practical area.	4
7 (e)(i)	Sources of Finance Levered Lease	F	T	Question on Levered Lease. Covered in book Volume III. Core theoretical question.	2
7 (e)(ii)	Contract Costing Escalation Clause	C	T	Normal question of contract costing. Meaning of Escalation Clause. Covered in concept register and in book volume III. Theoretical question related to practical area.	2

In above table:

QN	***:***	***Question number***
C / F	***:***	***Cost / FM***
N / T	***:***	***Numerical / Theoretical***
M	***:***	***Marks***

Referred Books in table:

Volume I	***:***	***Cost Accounting (Aug' 13 printed)***
Volume II	***:***	***Financial Management (Nov' 13 printed)***
Volume III	***:***	***Q 32, Theory Book (Nov' 13 printed)***

Comment:

Overall level of question		***:***	***Normal***
Total practical coverage:			
	Cost	***:***	***40 Marks***
	FM	***:***	***40 Marks***
Total theoretical coverage:			
Cost	***Core theory***	***:***	***Nil***
	Practical related	***:***	***18 Marks***
FM	***Core theory***	***:***	***10 Marks***
	Practical related	***:***	***8 Marks***

Suggested Answers for Nov'13 IPCC Cost FM

Question 1 (a)

Primex Limited produces product 'P'. It uses annually 60,000 units of a material 'Rex' costing ₹10 per unit. Other relevant information are:

Cost of placing an order	:	₹800 per order
Carrying cost	:	15% per annum of average inventory
Re-order period	:	10 days
Safety stock	:	600 units

The company operates 300 days in a year.

You are required to calculate:

(i) Economic Order Quantity for material 'Rex'.
(ii) Re-order Level
(iii) Maximum Stock Level
(iv) Average Stock Level

Answer

(i) Economic Order Quantity (EOQ)

$$= \sqrt{\frac{2AO}{C}}$$

$$= \sqrt{\frac{2\times 60{,}000\times 800}{10\times 15\%}}$$

$$= \textbf{8,000 units}$$

(ii) Re-order Level (ROL)

= Safety Stock + (Re-order period × Average consumption per day)

$$= 600 + \left(10\,\text{Days}\times \frac{60{,}000\,\text{Units}}{300\,\text{Days}}\right)$$

$$= \textbf{2,600 units}$$

(iii) Maximum Stock Level

= ROL + ROQ – (Re-order period × Average consumption per day)

$$= 2{,}600 + 8{,}000 - \left(10\,\text{Days}\times \frac{60{,}000\,\text{Units}}{300\,\text{Days}}\right)$$

$$= \textbf{8,600 units}$$

(iv) Average stock level

$$= \frac{1}{2} \text{ of ROQ + Safety stock}$$

$$= \frac{1}{2} \text{ of } 8{,}000 + 600 \text{ units}$$

$$= \textbf{4,600 units}$$

Question 1 (b)

Journalise the following transactions assuming cost and financial accounts are integrated:

(i)	Materials issued:	
	Direct	₹3,25,000
	Indirect	₹1,15,000
(ii)	Allocation of wages (25% indirect)	₹6,50,000
(iii)	Under/Over absorbed overheads:	
	Factory (Over)	₹2,50,000
	Administration (Under)	₹1,75,000

(iv) Payment to Sundry Creditors ₹1,50,000
(v) Collection from Sundry Debtors ₹2,00,000

Answer

Journal Entries

S. No.	Entries		Dr.	Cr.
(i)	Work-in-progress Ledger Control Account	Dr.	3,25,000	-
	Factory Overhead Control A/c	Dr.	1,15,000	-
	To Stores Ledger Control Account		-	4,40,000
	(Being issue of direct and indirect materials)			
(ii)	Work-in-progress Ledger Control Account	Dr.	4,87,500	-
	Factory Overhead Control A/c	Dr.	1,62,500	-
	To Wages Control A/c		-	6,50,000
	(Being allocation of direct and indirect wages)			
(iii)	Factory Overhead Control A/c	Dr.	2,50,000	-
	To Costing P/L A/c		-	2,50,000
	(Being factory overhead over absorbed)			
	Costing P/L A/c	Dr.	1,75,000	-
	To Administration Overhead Control A/c		-	1,75,000
	(Being administration overhead under absorbed)			
(iv)	Sundry Creditors	Dr.	1,50,000	-
	To Cash A/c		-	1,50,000
	(Being payments made to sundry creditors)			
(iv)	Cash A/C	Dr.	2,00,000	-
	To Sundry Debtors		-	2,00,000
	(Being collection received from sundry debtors)			

Question 1 (c)

Calculate the degree of operating leverage, degree of financial leverage and the degree of combined leverage for the following firms:

Particulars	N	S	D
Production (in units)	17,500	6,700	31,800
Fixed cost	₹4,00,000	₹3,50,000	₹2,50,000
Interest on loan	₹1,25,000	₹75,000	Nil
Selling price per unit	₹85	₹130	₹37
Variable cost per unit	₹38.00	₹42.50	₹12.00

Answer

Statement of the Degree of Operating Leverage, Degree of Financial Leverage and the Degree of Combined Leverage

Particulars	N	S	D
Production (in units)	17,500	6,700	31,800
Sales value @ ₹85/ ₹130/ ₹37 per unit	14,87,500	8,71,000	11,76,600
Less: Variable cost @ ₹38/ ₹42.50/ ₹12 per unit	6,65,000	2,84,750	3,81,600
Contribution	8,22,500	5,86,250	7,95,000
Less: Fixed cost	4,00,000	3,50,000	2,50,000
EBIT	4,22,500	2,36,250	5,45,000
Less: Interest on loan	1,25,000	75,000	-
EBT	2,97,500	1,61,250	5,45,000
	8,22,500	5,86,250	7,95,000
	4,22,500	2,36,250	5,45,000
	1.95 times	2.48 times	1.46 times

Operating leverage $\left(\frac{\text{Contribution}}{\text{EBIT}}\right)$	$\frac{4,22,500}{2,97,500}$	$\frac{2,36,250}{1,61,250}$	$\frac{5,45,000}{5,45,000}$
	1.42 times	1.47 times	1.00 time
Financial Leverage $\left(\frac{\text{EBIT}}{\text{EBT}}\right)$	$\frac{8,22,500}{2,97,500}$	$\frac{5,86,250}{1,61,250}$	$\frac{7,95,000}{5,45,000}$
	2.76 times	3.64 times	1.46 times
Combined Leverage $\left(\frac{\text{Contribution}}{\text{EBT}}\right)$			

Question 1 (d)

X Ltd. is considering the following two alternative financing plans:

Particulars	Plan I	Plan II
Equity Shares of ₹10 each	₹4,00,000	₹4,00,000
12% Debentures	₹2,00,000	-
Preference Shares of ₹100 each	-	₹2,00,000
	₹6,00,000	**₹6,00,000**

The indifference point between the plans is ₹2,40,000. Corporate tax rate 30%. Calculate the rate of dividend on preference shares.

Answer

$$\text{Rate of dividend} = \frac{\text{Preference Dividend}}{\text{Preference Share Capital}} \times 100$$

$$= \frac{16,800}{2,00,000} \times 100$$

$$= \mathbf{8.40\%}$$

Alternatively:

In this question no of equity shares are same under both financing plans. Hence, K_d of plan I must be equal to K_p of Plan II at indifference point because K_e under both plan will be same due to same no of equity shares and same equity share capital:

$K_d = K_p$

$K_d = I\,(1 - t)$

$= 12\%\,(1 - .30)$

$= 8.40\%$

K_p of rate of preference dividend = **8.40%**

Working Notes:

Calculation of preference dividend:

$$\frac{(EBIT - I)(1 - T)}{N_1} = \frac{[(EBIT - I)(1 - T)] - PD}{N_2}$$

$$\frac{(2,40,000 - 24,000)(1 - 0.30)}{40,000} = \frac{[(2,40,000 - Nil)(1 - 0.30)] - PD}{40,000}$$

$$1,51,200 = 1,68,000 - PD$$

Preference dividend (PD) = 16,800

Question 2 (a)

The following information relates to a bus operator:

Cost of the bus	₹18,00,000
Insurance charges	3% p.a.
Manager-cum accountant's salary	₹8,000 p.m.

Annual tax	₹50,000
Garage rent	₹2,500 p.m.
Annual repair and maintenance	₹1,50,000
Expected life of bus	15 years
Scrap value at the end of 15 years	₹1,20,000
Driver's salary	₹15,000 p.m.
Conductor's salary	₹12,000 p.m.
Stationery	₹500 p.m.
Engine oil, lubricants (for 1,200 kms.)	₹2,500
Diesel and oil (for 10 kms.)	₹52
Commission to driver and conductor (shared equally)	10% of collections
Route distance	20 km long

The bus will make 3 round trips for carrying on an average 40 passengers in each trip. Assume 15% profit on collections. The bus will work on an average 25 days in a month.
Calculate fare for passenger-km.

Answer

Statement of Fare for Passenger-km

Particulars	Amount
(A) Fixed Expenses:	
Depreciation per month [(18,00,000 - 1,20,000) × $^{1}/_{15}$ × $^{1}/_{12}$]	9,333
Insurance per month [(18,00,000 × 3%) × $^{1}/_{12}$]	4,500
Manager-cum accountant's salary	8,000
Annual Tax for one month (50,000 × $^{1}/_{12}$)	4,167
Garage Rent	2,500
Driver's salary	15,000
Conductor's salary	12,000
Stationery	500
Total (A)	**56,000**
(B) Variable Expenses:	
Repairs and maintenance (1,50,000 × $^{1}/_{12}$)	12,500
Diesel and oil ($^{52}/_{10}$ × 3,000 kms.)	15,600
Engine oil, lubricants ($^{2,500}/_{1,200}$ × 3,000 kms.)	6,250
Total (B) excluding commission	**34,350**
Total operating cost (A + B) excluding commission	**90,350**
Add: Commission @ 10% of collections	12,047
Add: Profit @ 15% of collections	18,070
Collections (WN 3)	**1,20,467**
÷ Total Passenger-kms	÷ 1,20,000
Fare for per passenger-km	**₹1.004**

WN 1: Calculation of total travelling of bus in one month:

= 2 × No of round trips daily × Distance one way × No of days
= 2 × 3 × 20 × 25
= 3,000 kms.

WN 2: Calculation of passenger-kms per month:

= No of kms. travelled per month × No of passengers
= 3,000 × 40

= 1,20,000 passenger-kms

WN 3: Calculation of collections:

Total collections	=	Operating cost (excluding commission on collections) + 10% for commission + 15% for profit
	=	90,350 + 25% of collections
Collections	=	1,20,467

Question 2 (b)

The assets of SONA Ltd. consist of fixed assets and current assets, while its current liabilities comprise bank credit in the ratio of 2 : 1. You are required to prepare the Balance Sheet of the company as on 31st March 2013 with the help of following information:

Share Capital	:	₹5,75,000
Working Capital (CA - CL)	:	₹1,50,000
Gross Margin	:	25%
Inventory Turnover	:	5 times
Average Collection Period	:	1.5 months
Current Ratio	:	1.5 : 1
Quick Ratio	:	0.8 : 1
Reserves & Surplus to Bank & Cash	:	4 times

Answer

SONA Ltd
Balance Sheet
(As at 31.03.2013)

Liabilities	₹	Assets	₹
Share Capital	5,75,000	Fixed Assets (b.f.)	6,85,000
Reserves & Surplus	2,60,000	Current Assets:	
Current Liabilities:		Bank & Cash	65,000
Bank Credit	1,50,000	Inventory	2,10,000
Other	1,50,000	Debtors	1,75,000
	11,35,000		**11,35,000**

Working Notes:

1. **Calculation of Current Assets and Current Liabilities:**

Current Ratio	=	$\frac{CA}{CL}$	=	1.5
CA	=	**1.5 CL**		
CA – CL	=	1,50,000		
1.5 CL – CL	=	1,50,000		
.5 CL	=	1,50,000		
CL	=	**3,00,000**		
CA	=	1.5 CL		
	=	1.5 × 3,00,000		
	=	**4,50,000**		

2. **Calculation of Bank Credit and other CL:**

$\frac{CL}{\text{Bank Credit}}$	=	2 : 1
Bank credit	=	CL ÷ 2
	=	3,00,000 ÷ 2
	=	**1,50,000**

Other CL = **1,50,000**

3. Calculation of Inventory:

Quick Ratio = $\frac{\text{CA} - \text{Inventory}}{\text{CL}}$ = 0.8

CA – Inventory = 0.8 CL

4,50,000 – Inventory = 0.8 × 3,00,000

Inventory = **2,10,000**

4. Calculation of Debtors and Bank and Cash:

Inventory Turnover = $\frac{\text{COGS}}{\text{Inventory}}$ = 4

COGS = 5 × 2,10,000

= **10,50,000**

Sales = $\frac{\text{COGS}}{100 - \text{margin}} \times 100$

= $\frac{10,50,000}{100-25} \times 100$

= **14,00,000**

Debtors = Sales × $\frac{\text{Average Collection Period}}{12}$

= 14,00,000 × $^{1.5}/_{12}$

= **1,75,000**

Bank and Cash = CA – Inventory – Debtors

= 4,50,000 – 2,10,000 – 1,75,000

= **65,000**

5. Calculation of Reserves & Surplus:

$\frac{\text{Reserves \& Surplus}}{\text{Bank \& Cash}}$ = 4 times

Reserves & Surplus = 4 × 65,000

= **2,60,000**

Question 3 (a)

The rate of change of labour force in a company during the year ending 31st march, 2013 was calculated as 13%, 8% and 5% respectively under 'Flux Method', 'Replacement Method', and 'Separation Method'. If the number of workers separated during the year is 40. You are required to calculate:

(i) Average number of workers on roll.
(ii) Number of workers replaced during the year.
(iii) Number of new accessions i.e. new recruitment.
(iv) Number of workers at the beginning of the year.

Answer

(i) Average number of workers on roll:

Separation Method = $\frac{\text{Number of separations}}{\text{Average number of workers}} \times 100$

5% = $\frac{40 \text{ workers}}{\text{Average number of workers}}$

Average number of workers = **800 workers**

(ii) Number of workers replaced = 8% of average workers
= 8% of 800
= **64 workers**

(iii) Number of new accessions:

Flux Method = $\frac{\text{No. of separations} + \text{No. of accessions}}{\text{Average number of workers}} \times 100$

13% = $\frac{40 + \text{No. of accessions}}{800} \times 100$

No. of accessions = 13% of 800 – 40
= 64 workers

No. of accessions = No. of replacement + No. of new accessions

No. of new accessions = No. of accessions - No. of replacement
= 64 workers – 64 workers
= **Nil (no new recruitment)**

(iv) Number of workers at the beginning:

Let opening workers be x
Now,

Closing workers = Opening workers + Replacement + New accessions - Separations
= x + 64 + Nil – 40
= x + 24

Average no of workers = [Opening workers + Closing workers] ÷ 2
800 = [x + x + 24] ÷ 2
x (opening workers) = **788 workers**

Question 3 (b)

APZ limited is considering to select a machine between two machines 'A' and 'B'. The two machines have identical capacity, do exactly the same job, but designed differently.

Machine A costs ₹8,00,000, having useful life of three years. It costs ₹1,30,000 per year to run. Machine B is an economic model costing ₹6,00,000, having useful life of two years. It costs ₹2,50,000 per year to run.

The cash flows of machine 'A' and 'B' are real cash flows. The costs are forecasted in rupees of constant purchasing power. Ignore taxes. The opportunity cost of capital is 10%.

The present value factors at 10% are:

Years	t_1	t_2	t_3
$PVIF_{0.10t}$	0.9091	0.8264	0.7513
$PVIFA_{0.10.2}$ = 1.7355			
$PVIFA_{0.10.3}$ = 2.4868			

Which machine would you recommend the company to buy?

Answer

Statement Showing Evaluation of Two Machines

Particulars	Machine 'A'	Machine 'B'
Initial outflow/ Purchase cost of machines	8,00,000	6,00,000
Annual running cost	1,30,000	2,50,000
Life of machines	3 years	2 years
PV of annual running cost	3,23,284	4,33,875
(Annual running cost × PVIFA)	(1,30,000 × 2.4868)	(2,50,000 × 1.7355)
Present value of total outflow	11,23,284	10,33,875

(initial outflow + PV of annual running cost) ÷ PVIFA	÷ 2.4868	÷ 1.7355
Equivalent Annual outflow	**4,51,699**	**5,95,722**

Select the Machine A having lower equivalent annualised outflow.

Question 4 (a)

SP Limited produces a product 'Tempex' which is sold in a 10 kg. packet. The standard cost card per packet of 'Tempex' are as follows:

Direct material 10 kg @ ₹45 per kg	₹450
Direct labour 8 hours @ ₹50 per hour	₹400
Variable overhead 8 hours @ 10 per hour	₹80
Fixed overhead	₹200
	₹1,130

Budgeted output for the third quarter of a year was 10,000 kg. Actual output is 9,000 kg. Actual cost for this quarter are as follows:

Direct materials 8,900 kg @ ₹46 per kg.	₹4,09,400
Direct labour 7,000 hours @ ₹52 per hour	₹3,64,000
Variable overhead incurred	₹72,500
Fixed overhead incurred	₹1,92,000

You are required to calculate:

(i) Material Usage Variance
(ii) Material Price Variance
(iii) Material Cost Variance
(iv) Labour Efficiency Variance
(v) Labour Rate Variance
(vi) Labour Cost Variance
(vii) Variable Overhead Cost Variance
(viii) Fixed Overhead Cost Variance

Answer

(i) Material Usage Variance = (SQ × SP) - (AQ × SP)
= (9,000 kg × ₹45) - (8,900 kg × ₹45)
= ₹4,05,000 – ₹4,00,500
= **4,500 F**

(ii) Material Price Variance = (AQ × SP) – (AQ × AP)
= (8,900 kg × ₹45) – (8,900 kg × ₹46)
= ₹4,00,500 – ₹4,09,400
= **8,900 A**

(iii) Material Cost Variance = (SQ × SP) – (AQ × AP)
= (9,000 kg × ₹45) – (8,900 kg × ₹46)
= ₹4,05,000 – ₹4,09,400
= **4,400 A**

(iv) Labour Efficiency Variance = (SH × SR) – (AH × SR)
= (9,000 kg × $^{8\text{ hours}}/_{10\text{ kg}}$ × ₹50) - (7,000 hours × ₹50)
= ₹3,60,000 - ₹3,50,000
= **10,000 F**

(v) Labour Rate Variance = (AH × SR) – (AH × AR)
= ₹3,50,000 – ₹3,64,000

= **14,000 A**

(vi) Labour Cost Variance = (SH × SR) – (AH × AR)
= ₹3,60,000 – ₹3,64,000
= **4,000 A**

(vii) Variable OH Cost Variance = (SH × SR) – (AH × AR)
= (9,000 kg × $^{8\text{ hours}}/_{10\text{ kg}}$ × ₹10) – ₹72,500
= **500 A**

(viii) Fixed OH Cost Variance = (SH × SR) – (AH × AR)
= (9,000 kg × $^{1}/_{10\text{ kg}}$ × ₹200) – ₹1,92,000
= **12,000 A**

Question 4 (b)

The following are the summarized Balance Sheet of Flexon Limited as on 31st March 2012 and 2013

Liabilities	31.03.12 (₹)	31.03.13 (₹)	Assets	31.03.12 (₹)	31.03.13 (₹)
Share Capital	8,00,000	8,00,000	Goodwill	15,000	15,000
General Reserve	1,40,000	1,80,000	Building	4,00,000	3,60,000
Profit & Loss A/c	1,60,000	2,70,000	Plant	3,70,000	5,20,000
Sundry Creditors	1,71,000	1,67,000	Investment (long-term)	1,20,000	1,50,000
Bills Payable	20,000	30,000	Stock	3,00,000	2,30,000
Provision for Tax	1,60,000	1,80,000	Debtors	1,80,000	2,00,000
			Cash & Bank	66,000	1,52,000
	14,51,000	**16,27,000**		**14,51,000**	**16,27,000**

Additional information:

(1) Depreciation charged during the year 2012-2013:
On Plant : ₹40,000
On Building : ₹40,000
(2) Provision for tax of ₹1,90,000 was made during the year 2012-2013.
(3) Interim dividend paid during the year 2012-2013:
Interim Dividend : ₹80,000
Corporate Dividend Tax : ₹13,596

Prepare:

(i) Statement of changes in working capital.
(ii) Fund flow statement for the year ended 31st March, 2013.

Answer

(i) Statement of Changes in Working Capital

Particulars	2012	2013
(A) Current Assets:		
Stock	3,00,000	2,30,000
Debtors	1,80,000	2,00,000
Cash & Bank	66,000	1,52,000
Total (A)	**5,46,000**	**5,82,000**
(B) Current Liabilities:		
Sundry Creditors	1,71,000	1,67,000
Bills Payable	20,000	30,000
Total (B)	**1,91,000**	**2,07,000**
Working Capital (A - B)	3,55,000	3,85,000
Increase in Working Capital	**30,000**	**-**

	3,85,000	**3,85,000**

Note: One may include provision for tax in current liabilities and exclude it from fund from operations and applications of fund.

(ii) Fund Flow Statement (For the year ended 31.03.2013)

Sources of Fund	₹	Applications of Fund	₹
Funds From Operations (WN '1')	5,13,596	Payment of Income Tax (WN '2')	1,70,000
		Purchase of Plant (WN '3')	1,90,000
		Purchase of Investment (1,50,000 – 1,20,000)	30,000
		Interim Dividend Paid	80,000
		Corporate Dividend Tax Paid	13,596
		Increase in Working Capital	30,000
	5,13,596		**5,13,596**

Working Note:

WN '1' Calculation of fund from operations

Particulars	₹
Increase in Profit & Loss A/c (2,70,000 – 1,60,000)	1,10,000
Add: Transfer to General Reserve (1,80,000 – 1,40,000)	40,000
Add: Interim Dividend	80,000
Add: Corporate Dividend Tax	13,596
Add: Depreciation on Plant and Building (40,000 + 40,000)	80,000
Add: Provision for Tax	1,90,000
Fund from operations	**5,13,596**

WN '2' Provision for Tax A/c

Particulars	₹	Particulars	₹
To Bank A/c (Tax paid)	1,70,000	By Bal b/d	1,60,000
To Bal b/d	1,80,000	By Profit & Loss A/c	1,90,000
	3,50,000		**3,50,000**

WN '3' Plant & Machinery A/c

Particulars	₹	Particulars	₹
To Bal b/d	3,70,000	By Depreciation	40,000
To Bank/ Purchase (b.f.)	1,90,000	By Bal c/d	5,20,000
	5,60,000		**5,60,000**

Question 6 (a)

Calculate Machine Hour Rate from the following particulars:

Cost of machine	:	₹25,00,000
Salvage value	:	₹1,25,000
Estimated life of machine	:	25,000 hours
Working hours (per annum)	:	3,000 hours
Hours required for maintenance	:	400 hours
Setting-up time required	:	8% of actual working hours

Additional Information:

(i) Power 25 units @ ₹5 per unit per hour.
(ii) Cost of repairs and maintenance ₹26,000 per annum.
(iii) Chemicals required for operating the machine ₹2,600 per month.
(iv) Overheads chargeable to the machine ₹18,000 per month.
(v) Insurance premium (per annum) 2% of the cost of machine.
(vi) No. of operators – 02 (looking after three other machines also).

(vii) Salary per operator per month ₹18,500.

Answer

Statement of Machine Hour Rate

Particulars	Amount
(A) Standing Charges:	
Overhead chargeable (₹18,000 × 12)	2,16,000
Insurance premium (2% of ₹25,00,000)	50,000
Operators salaries (2 × ₹18,500 × 12 × $^{1}/_{4}$)	1,11,000
Total (A)	**3,77,000**
(B) Running Charges:	
Depreciation (25,00,000 – 1,25,000) × $^{3,000}/_{25,000}$	2,85,000
Power (25 units × 2,392 hours × ₹5)	2,99,000
Repairs & Maintenance	26,000
Chemicals (₹2,600 × 12)	31,200
Total (B)	**6,41,200**
Total Operating Cost (A + B)	10,18,200
÷ Productive hours	÷ 2,392
Machine Hour Rate	**₹425.67**

Working Notes:

Calculation of actual hours and productive hours:

Total working hours per annum	3,000
Less: hours required for maintenance	(400)
Actual working hours	**2,600**
Less: Setting-up hours (8% of 2,600)	(208)
Productive/ Effective working hours	**2,392**

Assumptions:

1. Power is used only for productive hours i.e. 2,392 hours.
2. Setting-up and maintenance time is treated as unproductive time.

Question 6 (b)

PTX Limited is considering a change in its present credit policy. Currently it is evaluating two policies. The company is required to give a return of 20% on the investment in new receivables. The company's variable costs are 70% of selling price. Information regarding present and proposed policies are as follows:

Particulars	Policies		
	Present	Option 1	Option 2
Annual credit sales	₹30,00,000	₹42,00,000	₹45,00,000
Debtors turnover ratio	4 times	3 times	2.4 times
Loss due to bad debts	3% of sales	5% of sales	6% of sales

Note: Return on investment in new account receivable is based on cost of investment in debtors.

Which option would you recommend?

Answer

Statement of Evaluation

Particulars	Policies		
	Present	Option 1	Option 2
1. Increase in contribution:			
Annual credit sales	30,00,000	42,00,000	45,00,000
Less: Variable cost @ 70%	21,00,000	29,40,000	31,50,000

Contribution	9,00,000	12,60,000	13,50,000
Incremental contribution	**-**	**3,60,000**	**4,50,000**
2. Incremental cost of investment in debtors:			
Average debtors (Sales ÷ DTR)	7,50,000	14,00,000	18,75,000
Cost of investment in debtors @ 70%	5,25,000	9,80,000	13,12,500
Incremental cost of investment in debtors	**-**	**4,55,000**	**7,87,500**
3. Incremental bad debts:			
Bad debts @ 3%/ 5%/ 6% of sales	90,000	2,10,000	2,70,000
Incremental bad debts	-	**1,20,000**	**1,80,000**
4. Incremental Benefit:			
Incremental contribution	-	3,60,000	4,50,000
Less: Required return @ 20% (Incremental investment × 20%)	-	(91,000)	(1,57,500)
Less: Incremental bad debts	-	(1,20,000)	(1,80,000)
Incremental Benefit	**-**	**1,49,000**	**1,12,500**

Note: This question has been solved by using incremental approach; Student may solve the same question by using total approach.

Recommendation: PTX Limited should follow **option 1** having higher incremental benefit i.e. DTR 3 times or 4 months credit.