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SOLUTIONS TO IMPORTANT PROBLEMS - COST ACCOUNTING AND FINANCIAL MANAGEMENT – IPCE GR 1 – MAY 2012

1a)

Working of Production Budget – 2012 (Quarterly)

Particulars	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Opening Stock	6,000	7,200	8,100	8,700	30000
70% of Demand – Current quarter	12,600	15,400	17,500	18,900	64,400
30% of Demand – following quarter	6,600	7,500	8,100	7,400	29,600
Sales	18,000	22,000	25,000	27,000	92,000
Closing Stock (Opening Stock + Production – Sales)	**7,200**	**8,100**	**8,700**	**8000**	**32,000**

Working for BEP

$$BEP = \frac{\text{Fixed Cost}}{\text{PV Ratio}}$$

= 2,20,000/ 0.1375* = 40000 units

* working of PV ratio
PV ratio = Contribution/ Sales
= (Sales – Variable cost)/ Sales
= (40-34.5)/40X100 = 13.75% or 0.1375

Total Sales in Q II is 40000 equal to BEP, and so BEP is achieved in II Quarter

1 (b)

Computation of Machine Hour Rate

Particulars	**Amount (Rs.)**
Depreciation	99,000
Repair and Maintenance	5,000
Insurance	1,000
Rent	2,880

	107,880

Productive Hours =Working hours – non productive hours
= 4200 – 200 = **4000 hrs**

Machine hour rate = Rs 107,880/4000 + 8hrsX 3.75
= Rs 26.97+Rs30
= **Rs56.97**

Workings

Depreciation = (Rs 1000000 – Rs 10000)/10 = Rs. 99000

Insurance = 9000/90X10 = Rs 1000

Rent = (Rs2400X12)/1500X150= Rs 2880

1 c)

Market Value of RES Ltd

As pe MM model

Market Value = Rs 25,00,000 + (500000X30%) = **Rs. 26,50,000**

Cost of Equity

Earning after tax – current (25,00,000 at 21%)	Rs 5,25,000
Tax at 30%	Rs 2,25,000

EBIT	Rs 7,50,000
Interest (500000X15%)	(Rs 75,000)

PBT	Rs 6,75,000
Tax 30%	(Rs 2,02,500)

Earning to Equity holders	**Rs 4,72,500**

Equity = Rs 26,50,00 – Rs 500000 (debt) = **Rs 21,50,000**

Cost of Equity (Ke) = Rs 4,72,5000/21,50,000 = **21.98%**

Weighted Average Cost of Capital (WACC)

= (Earning to Equity holders + Interest after tax) / market value
= (4,72,500+(75000*0.70))/26,50,000 = **19.81%**

Comments
By seeing the workings above after restructuring, WACC is 19.81% and Ke 21.98% increase from 21%. Increase in Ke and reduction in Ko shows good signs of progress and it is a positive indicator.

1 d)

Evaluation of Credit Policy **(Amount in Rs)**

Particulars	Existing Policy	Proposed Policy
Credit Sales	**12,00,000**	**16,00,000**
Less		
Contribution (22%)	2,64,000	3,52,000
Annual bad debts loss	18,000	32,000
Cash Discount *	6,000	25,600
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PBT	**9,12,000**	**11,90,400**
Less : Tax (30%)	2,73,600	3,57,120
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PAT	**6,38,400**	**8,33,280**

Since, Net PAT benefit in case of proposed policy is higher by Rs 1,94,880 (Rs 833,280 – Rs 638,400) , the company should change its credit policy and adopt proposed policy.

*** Working for Cash Discount**
Cash discount = Total Credit sales X % customers opted for X Rate of discount

Present Policy = (12,00,000*50*0.1)/ 100 = Rs 6000
Proposed Policy = (16,00,000*0.80*0.20)/100 = Rs 25,600

2a)

Contract Account (01/07/2011 to 31/03/2012)

Particulars	Amount	Particulars	Amount
To Materials	774300	By Materials	75800
To Labour paid	1079000	By Plant – at Site	693750
To Outstanding – Labour	102500	By Sale – Materials	10000
To Salary	184500	By Profit and loss	3500
To Plant Sent	771000	By WIP Work Certified	 2250000
To Supervisor Salary	60750	Work Uncertified	659900*
To Admin Expenses (net)	450600		
To Notional Profit (bal fig)	270300		
	3692950		**3692950**
		By Notional Profit B/d	270300
To Profit and loss A/c	160178*		
To WIP	110122		
	270300		**270300**

Workings

Cost of 2/3 work completed = Rs3692950-270300-75800-693750-10000-3500 (see contract a/c above)

= **Rs 26, 39,600**

Total Contract cost = Rs 26,39,600X 3/2 (as it is given 2/3 of work is completed)

= **Rs39,59,400**

Cost of Uncertified work = Rs 2639600 – 50% of contract cost (50%X3959400)

= Rs 2639600- Rs1979700

= **Rs 6,59,900**

Profit for Profit and Loss Account

= Notional Profit X 2/3 (Cash Received/Work Certified)

= 270300X2/3 (2000000/2250000) = Rs 160178

2(b)

Cash Flow Statement

Cash from Operating Activities

			(Amount in Rs.)	
Profit (see workings)			1,30,000	
Add :	Provision for Tax		1,78,000	
	Depreciation		2,05,000	
	Loss on sale		15,000	
	Preliminary Expenses Write off		10,000	
			5,38,000	
Less:	Increase in Stock	1,85,000		
	Increase in Debtors	2,55,000		
			(4,40,000)	
			98,000	
Add:	Increase in Creditors		65,000	
			1,63,000	
Less :	Taxes paid		1,58,000	
	Cash from Operating Activity		**5,000**	**A**

Cash from Investing Activities

	(Amount in Rs.)	
Asset Purchased*	(1,10,000)	
Sale of Machinery	65000	
Cash flow from Investing Activities	**(45,000)**	**B**

__**Cash from Financing Activities**__

Issue of Shares*	2,00,000	
Debenture Redemption	(1,05,000)	
Cash Flow from Financing Activities	**95,000**	**C**
Total Cash Inflows (A+B+C)	**55,000**	**1**
Add Opening Balance of Cash	**1,25,000**	**2**
Cash Balance (1 + 2)	**1,80,000**	

Working Notes

__Calculation of Profits__

Difference in Profit (2012 and 2011)	Rs 80,000
Profit transferred to Reserves	Rs 50,000
	Rs1,30,000

__Calculation of Asset Purchased__

Asset Cost – 2011	Rs 20,50,000
Less Depreciation	Rs 2,05,000
Less Old machine WDV	Rs 80,000
	Rs 17,65,000
Less Asset cost 2012	Rs 18,75,000
Asset Pruchased	**Rs 1,10,000**

__Calculation of Issue of shares__

Share capital 2011	Rs 18,00,000
Add Bonus Issue	Rs 2,00,000
	Rs 20,00,000
Share Capital 2012	Rs 22,00,000
Issue of Shares	**Rs 2,00,000**

3 (a) - Simple problem, just use formula for Incentive methods asked

3 (b)

Working Capital Requirement

<u>Current Assets</u>

Raw Materials Inventory		
(54000X120X2/12)	Rs 1080000	
Work in Progress		
Raw Material		
(54000X120X1/12)	Rs 5,40,000	
Wages		
(54000X20X1/2)50%	Rs 45,000	
Overheads		
(54000X40X1/12)50%	Rs 90,000	
Finished Goods		
(54000 X 180 X 1/12)	Rs 8,10,000	
Debtors		
(54,000X180X1.5/12)	Rs 1,21,5000	
Cash	Rs 2,52,000	

Total	**Rs 40,32,000**	**1**

<u>Current Liabilities</u>

Creditors – Raw Material		
(54000X120X1/12)	Rs 540000	
Creditors – Wages		
(65000X20X1/12)	Rs 90000	

Total	**Rs 630000**	**2**

Working Capital (1 – 2) **Rs 3402000**

<u>Working Capital on Cash cost basis = Rs 3402000 + 15% Safety Margin = Rs 39,12,300</u>

Q 4 a) and Q 4 b) are simple problems and need to use the respective formulas to solve it .

Q 6 a)

Process A A/c

Dr. **Cr.**

Particulars	**Qty**	**Rate**	**Amt (Rs.)**	**Particulars**	**Qty**	**Rate**	**Amnt (Rs.)**
To Rawmaterial	8000	9.00	72,000	By Normal Loss	400	2.00	800
To Direct Wages			12,000	By Abnormal Loss	100	12.50*	1,250
To Direct Expenses			6000	By transfer to Process B	5000	12.50	62,500
To Overheads (17,400/3)			5,800	By Sales (7500/3)	2,500	15.00	37,500
To **Gross Profit (bal fig)**			**6,250**				
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			1,02,050				**1,02,050**

Process B A/c

Dr. **Cr.**

Particulars	**Qty**	**Rate**	**Amt (Rs.)**	**Particulars**	**Qty**	**Rate**	**Amnt (Rs.)**
To Process A	5000	12.50	62,500	By Normal Loss	500	10.00	5000
To Direct Wages			24,000	By Sales	4800	25.00	1,20,000
To Direct Expenses			5,000				
To Overhead			11,600				
To Abnormal Gain	300	21.8*	6,540				
To Gross Profit (bal fig)			**15,360**				
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			1,25,000				**1,25,000**

Abnormal Loss per unit

= (Rs 95800 – 800) / (8000-400) = **Rs 12.50 per unit**

Abnormal Gain per unit
= (1,03,100 – 5000) / (5000-500) = **Rs 21.80 per unit**

Note – Selling Expenses will be debited to profit and loss account as it is an Indirect expenses.

6 b)

Computation of Earnings for Equity Shareholders

	Rs.
Contribution	7,50,000
Less Fixed Cost	4,50,000
EBIT	3,00,000
Less: Interest	40,000
EBT	2,60,000
Less : Tax 30%	78,000
EAT	1,82,000
Less : Preference divided	50,000
Earnings for Equity Shareholders	**1,32,000**

1. **Operating Leverage**

    = Contribution / EBIT = 7,50,000/3,00,000 = 2.5

2. **Financial Leverage**

    = EBIT/PAT = 300000/1,82,000 = 1.65

3 <u>Cover for Preference Dividend and Equity Shares Dividend</u>

Cover for Preference Dividend = PAT/dividend
= 1,82,000/ 50000 = **3.64 times**

Cover for Equity Dividend = Earning to Equity shareholder / Equity Dividend
= 1,32,000/1,20,000 = **1.1 times**

4. <u>Earning Yield and Price Earning Ratio</u>

Earning Yield = Earning to Equity shareholders / Equity share capital
= 1,32,000 /8,00000 = **0.165**

PE Ratio = Market Price / Earning Per Share (EPS)
= 20/ (1,32,000/80000) = **12:1**

5 **<u>Net Fund Flow</u>**

Net Fund Flow = PAT + Depreciation – Dividend(both equity and preference)
= 1,82,000+90000-170000 (equity Rs 50000+ preference Rs 120000)
= Rs 1,02,000