MANAGEMENT ACCOUNTING – SEMESTER-4

Marks

Question No: 2

(a) Sales Revenue Budgets:

	Plain	Chocolate	Lemon	Marks
Boxes	10,000	20,000	15,000	
Revenue (Rs.)	50,000	130,000	120,000	2

(b) Production Quantity Budget in Boxes:

	Plain	Chocolate	Lemon		Marks
Sales	10,000	20,000	15,000		
Opening	1,200	2,300	1,750		
Closing	1,050	2,500	1,600		
Production	9,850	20,200	14,850		
	1 +	1 +	1	=	3

(c) Material Requirement Budget in kg:

	Flour		Sugar		Butter		Chocolate		Lemon		Marks
	Per Box	Total	Per Box	Total	Per Box	Total	Per Box	Total	Per Box	Total	
Plain	0.4	3,940	0.1	985	0.2	1,970		-		-	
Chocolate	0.3	6,060	0.3	6,060	0.2	4,040	0.3	6,060		-	
Lemon	0.3	4,455	0.4	5,940	0.2	2,970		-	0.2	2,970	
Total Usage		14,455		12,985		8,980		6,060		2,970	
		1	+	1	+	1	+	½	+	½ =	4

(d) Material Purchase Budget in kg:

	Flour	Sugar	Butter	Chocolate	Lemon		Marks
Usage	14,455	12,985	8,980	6,060	2,970		
Opening	730	820	320	–	–		
Closing	750	800	250	–	–		
Production	14,475	12,965	8,910	6,060	2,970		
	1 +	1 +	1			=	3

Material Purchase budget in value: (Rupees)

	Flour	Sugar	Butter	Chocolate	Lemon	Marks
Purchase	14,475	12,965	8,910	6,060	2,970	
Cost per kg	4.00	6.00	6.00	50.00	8.00	
Total cost	57,900	77,790	53,460	303,000	23,760	3

Marks

Question No: 3

(a) **(i)** Decision to Accept the Offer or not, Ignoring Taxation:

Year	Cash outflow	Cash Saving	Net CF	PV Factory at 18%	PV	Marks
0	(5,000,000)		(5,000,000)	1.0000	(5,000,000)	
1	(16,000)	**1,250,000**	1,234,000	0.8475	1,045,763	1
2	(216,000)	1,250,000	1,034,000	0.7182	742,603	½
3	(16,000)	1,250,000	1,234,000	0.6086	751,050	½
4	(216,000)	1,250,000	1,034,000	0.5158	533,326	½
5	(16,000)	1,250,000	1,234,000	0.4371	539,393	½
6	(216,000)	1,250,000	1,034,000	0.3704	383,026	½
7	(16,000)	1,250,000	1,234,000	0.3139	387,383	½
8	(216,000)	1,250,000	1,034,000	0.2660	275,083	½
9	(16,000)	1,250,000	1,234,000	0.2255	278,213	½
10	(16,000)	**1,320,000**	1,304,000	0.1911	249,148	1
				NPV	**184,988**	1
	2 +	2 +	1 +		2	= 7

Decision: Accept the offer. 1

(ii) Decision to Accept the Offer or not, With 35% Taxation:

Year	Cash Outflow	Cash Saving	Deprecation	Add- Profit	PAT	Net CF	PV Factory at 11.70%	PV	Marks
A	**B**	**C**	**D**	**E (C-B-D)**	**F (E x 65%)**	**G (F + D)**	**H**	**I (G x H)**	
0	(5,000,000)					(5,000,000)	1.0000	(5,000,000)	
1	(16,000)	1,250,000	(493,000)	741,000	481,650	974,650	0.8953	872,560	1
2	(216,000)	1,250,000	(493,000)	541,000	351,650	844,650	0.8015	676,972	½
3	(16,000)	1,250,000	(493,000)	741,000	481,650	974,650	0.7175	699,341	½
4	(216,000)	1,250,000	(493,000)	541,000	351,650	844,650	0.6424	542,580	½
5	(16,000)	1,250,000	(493,000)	741,000	481,650	974,650	0.5751	560,509	½
6	(216,000)	1,250,000	(493,000)	541,000	351,650	844,650	0.5149	434,868	½
7	(16,000)	1,250,000	(493,000)	741,000	481,650	974,650	0.4609	449,238	½
8	(216,000)	1,250,000	(493,000)	541,000	351,650	844,650	0.4126	348,539	½
9	(16,000)	1,250,000	(493,000)	741,000	481,650	974,650	0.3694	360,056	½
10	(16,000)	1,320,000	(493,000)	811,000	527,150	1,020,150	0.3307	337,390	1
							NPV	282,054	1
			2 +		2 +	2 +		1 =	7

Decision: Accept the offer. 1

Marks

Question No: 3

(b) **(i)** Sensitivity Analysis:

Sensitivity analysis is a **method of analyzing the effect of change of any variable in an investment (capital expenditure) appraisal decision** enabling to assess the responsiveness of project's NPV with the **changes in the variables that are used to calculate the NPV.** 2

(ii) Sensitivity of the Project:

Year	Discount Factor at 10%	PV of Cost	PV of Running Costs	PV of Revenue	PV of Net Revenue Flow
0	1.0000	(14,500)	–	–	(14,500)
1	0.9091	–	(4,545)	10,909	6,364
2	0.8264	–	(5,785)	13,223	7,438
		(14,500)	(10,331)	24,132	(698)
			1 +	1 +	2 = 4

The PV of cost can decrease by Rs.698 or PV of revenue can increase by Rs.698 before project breaks even. 2

Question No: 4

(a) Existing break-even in trips and amount:

Fixed Cost	Rupees	
Fixed cost	3,000,000	
Mandatory trips (360 x 4,500)	1,620,000	2
Total Fixed Cost	4,620,000	1

$$\text{Break-even (Rs.)} = \frac{\text{Fixed Cost}}{\text{CM\%}} = \frac{4,620,000}{40\%} = 11,550,000 \quad 2$$

$$\text{Break-even (Trips)} = \frac{\text{Fixed Cost}}{\text{CM per trip}} = \frac{4,620,000}{3,000} = 1,540 \quad 2$$

(b) Trips Need to be Completed to achieve profit target:

	Profit	=	CM per unit x Nos. of trips – fixed cost			1
OR	5,000,000	=	3,000 x Nos. of trips – 4,620,000			1
OR	5,000,000	+	4,620,000	=	3,000 x Nos. of trips	1
	9,620,000	÷	3,000	=	Nos. of trips	
	Nos. of trips	=	**3,207**			1

	Rupees
Revenue	24,050,000
Less: Variable Cost	14,430,000
Contribution Margin	9,620,000
Less: Fixed Cost	4,620,000
Net operating income	5,000,000

Marks

(c) Breakeven in Percentage and Amount After New System:

	Rupees	Marks
Variable Cost per trip	4,500	
Less : 3% saving	135	
Variable Cost per trip	4,365	1
Fixed Cost	4,620,000	
Less: Saving	400,000	
	4,220,000	1

CM Per trip = 7,500 – 4,365
= 3,135

Breakeven % = **41.80%** 1

Breakeven (Rs.) = $\frac{\text{Fixed Cost}}{\text{CM\%}} = \frac{4,220,000}{41.80\%} =$ 10,095,694 1

Breakeven (trips) = $\frac{\text{Fixed Cost}}{\text{CM per trip}} = \frac{4,220,000}{3,135} =$ 1,346

Question No: 5

(a)

The Home Company
Statements of Financial Position

Current Assets Alternatives	**30%**	**50%**	**70%**		Marks
			Rupees		
Current assets (% of sales)	1,800,000	3,000,000	4,200,000		1½
Fixed assets	1,200,000	1,200,000	1,200,000		
Total assets	3,000,000	4,200,000	5,400,000		
Debt	1,800,000	2,520,000	3,240,000		
Equity	1,200,000	1,680,000	2,160,000		1½
Total liabilities and equity	3,000,000	4,200,000	5,400,000		
	1 +	1 +	1	=	3
				Presentation =	½

Income Statement

Current Assets Alternatives	**30%**	**50%**	**70%**		Marks
			Rupees		
Sales	6,000,000	6,000,000	6,000,000		
EBIT	900,000	900,000	900,000		
Interest 10%	180,000	252,000	324,000		1½
Earning before tax	720,000	648,000	576,000		
Tax	252,000	226,800	201,600		
Net Income	468,000	421,200	374,400		
ROE	39.00%	25.07%	17.33%		3
	1½ +	1½ +	1½	=	4½

Marks

Question No: 5

(b) (i) Reasons for purpose of preparing a cash budget:

There are several reasons for preparing a cash budget including the following:

1. To predict the cash balance over the period of the budget.
2. To arrange an appropriate overdraft facility with the bank.
3. To plan uses for any anticipated cash surpluses.
4. To plan the timing of expenditure.

Four (4) Reasons @ ½ each = 2

(ii) & (iii)

Cash Budget
for March to June 2013

Rupees

	March 13	April 13	May 13	June 13	Total	Marks
Receipts						
Capital	120,000				120,000	
Cash Sales		13,000	15,000	18,000	46,000	1
Total	**120,000**	**13,000**	**15,000**	**18,000**	**166,000**	
Payments						
Van	90,000				90,000	
Machinery	30,000				30,000	
Van-Painting		7,000			7,000	
Purchase-Opening Inventory		38,500			38,500	
Purchase-Replacement Inventory			3,900	4,500	8,400	1
Petrol		800	800	800	2,400	
Motor Insurance		7,500			7,500	
Drawings		5,000	5,000	5,000	15,000	
	120,000	**58,800**	**9,700**	**10,300**	**198,800**	2
Months surplus/ deficit		**(45,800)**	**5,300**	**7,700**		
Opening balance		5,000	5,000	5,000		
Net surplus/ (deficit)	–	(40,800)	10,300	12,700		
Closing balance required	5,000	5,000	5,000	5,000		
Financing/ (repayment) during month	**5,000**	**45,800**	**(5,300)**	**(7,700)**		2
Cumulative Financing	5,000	45,800	40,500	32,800		1
Interest	41.67	381.67	337.50	273.33		1

Marks

Question No: 6

(a) Ranking of the Customers:

Rupees

	A	B	C	Marks
Gross margin	897,000	1,070,000	1,056,000	
Less: Customer specific costs				
Sales visits	33,600	21,000	42,000	1
Ordering processing	57,000	60,800	91,200	1
Dispatch costs	105,000	112,000	168,000	1
Billing and collections	30,070	37,830	101,850	1
General administration cost	46,883	55,925	55,192	1
	272,553	287,555	458,242	1
Profit	624,447	782,445	597,758	1
Ranking	2	1	3	1

(b) The Standard Product Cost and Selling Price per Unit:

Direct Materials		Rupees	Marks
X:		10	
Y:		25	
Direct labuor		15	
Fixed overhead		30	
Standard cost		80	
Profit		20	
Selling price		100	1
Budgeted profit	(10,000 x 20)	200,000	1

		Rupees	Marks
Actual profit for the period			
Sales (110% x 100 x 9,500)		1,045,000	
Direct materials			
X:	115,200		
Y:	225,600		
Direct labour	147,200		
Fixed overhead	290,000		
Standard cost		778,000	1
Profit		267,000	1

Marks

Question No: 6

		Rupees		Marks
Material Variances:				
Material Price Variance = AQ x (AR - SR)				½
X:	96,000 x (1.2 – 1)	19,200	A	½
Y:	48,000 x (4.7 – 5)	(14,400)	F	½
Material usage Variance = SR x (AQ - SQ)				½
X:	1 x (96,000 – 95,000)	1,000	A	½
Y:	5 x (48,000 – 47,500)	2,500	A	½
Labour Variances:				
Labour Rate Variance = AH x (AR - SR)				½
	46,000 x (3.2 – 3)	9,200	A	½
Labour Efficiency Variance = SR x (AH - SH)				½
	3 x (46,000 – 47,500)	(4,500)	F	½
Factory Overhead Variance:				
Actual overhead		290,000		
Less: Budgeted Overhead		(300,000)		
Overhead Variance		(10,000)	F	1

THE END