



Cost and Management Accounting

Q.1 Ababeel Foods produces and sells chicken nuggets. Boneless chicken is minced, spiced up, cut to standard size and semi-cooked in the cooking department. Semi-cooked pieces are then frozen and packed for shipping in the finishing department.

Inspection is carried out when the process in the cooking department is 80% complete. Normal loss is 5% of input and comprises of:

- 2% weight loss due to cooking; and
- 3% rejection of nuggets. The rejected nuggets are sold at Rs. 60 per kg.

Overheads are applied at the rate of 120% of direct labour cost. Inventory is valued using weighted average cost. Following information pertains to cooking department for the month of June 2014:

	Kg.	Material ----- Rs. in '000 -----	Labour
Opening work in progress (100% complete to material and 50% complete to conversion)	30,000	6,260	1,288
Costs for the month	420,000	50,000	20,000
Weight after cooking	440,000	-	-
Transferred to finishing department	362,000	-	-
Closing work in progress (100% complete to material and 65% complete to conversion)	65,000	-	-

Required:

Prepare process account for cooking department for the month of June 2014.

(15)

Q.2 Auto Industries Limited (AIL) manufactures auto spare parts. Currently, it is operating at 70% capacity. At this level, the following information is available:

Break-even sales	Rs. 125 million
Margin of safety	Rs. 25 million
Contribution margin to sales	20%

AIL is planning to increase capacity utilization through the following measures:

- (i) Selling price would be reduced by 5% which is expected to increase sales volume by 30%.
- (ii) Increase in sales would require additional investment of Rs. 40 million in distribution vehicles and working capital. The additional funds would be arranged through a long-term loan at a cost of 15% per annum. Depreciation on distribution vehicles would be Rs. 5 million.
- (iii) As a result of increased production, economies of scale would reduce variable cost per unit by 10%.

Required:

- (a) Prepare profit statements under current and proposed scenarios.
- (b) Compute break-even sales and margin of safety after taking the above measures.

(07)

(04)

Q.3 Omega Limited (OL) is the sole distributor of goods produced by ABC Limited which is a leading brand in the international market. OL is now planning to establish a factory in collaboration with ABC Limited. The factory would be established on a land which was purchased at a cost of Rs. 20 million in 2005. The existing market value of the land is Rs. 40 million. The cost of factory building and plant is estimated at Rs. 30 million and Rs. 100 million respectively.

The factory will produce goods which are presently supplied by ABC Limited. The sale for the first year of production is estimated at Rs. 300 million. The existing profit margin is 20% on sales. As a result of own production, cost per unit would decrease by 10%. The sale price and cost of production per unit (excluding depreciation) are expected to increase by 10% and 8% respectively, each year.

Following further information is available:

- ABC Limited would assist in setting up of the factory for which it would be paid an amount of Rs. 10 million at the time of signing the agreement. In addition, ABC Limited would be paid a royalty equal to 3% of sales.
- The factory building and installation of plant would be completed and commercial production would start one year after signing the agreement.
- 50% of the cost of plant would be financed through a five year loan with interest payable annually at 10% per annum. Principal would be repaid at the end of 5th year.
- A working capital injection of Rs. 15 million would be required at the commencement of commercial production.
- OL charges depreciation on factory building and plant under the straight line method.
- OL uses a five year project appraisal period. The residual value of the factory building and plant after five years is estimated at 50% and 10% of cost respectively.
- The market value of the land after five years is estimated at Rs. 70 million.
- OL's cost of capital is 12%.

Required:

Calculate the net present value of the project assuming that unless otherwise specified, all cash inflows/outflows would arise at the end of year. Ignore taxation. (15)

Q.4 Hexa Limited is a manufacturer of various machine parts. Following information has been extracted from the cost records of one of its products AXE for the month of June 2014:

(i) Standard cost per unit:

	Rupees
Raw material	170.00
Direct labour (1.25 hours)	150.00
Overheads	137.50

(ii) Based on normal capacity of 128,000 direct labour hours, fixed overheads are estimated at Rs. 2,560,000.

(iii) Following information pertains to production of 100,000 units of product AXE:

Actual direct labour hours worked		130,000
Unfavorable material usage variance	Rs.	820,000
Unfavorable material price variance	Rs.	600,000
Actual direct labour cost	Rs.	16,250,000
Actual fixed and variable overheads	Rs.	15,500,000

Required:

Compute the following for the month of June 2014:

- (a) Actual material cost (02)
- (b) Labour variances (04)
- (c) Overhead variances, using four variance method (10)

- Q.5 (a) What are the non-financial considerations relevant to make-or-buy decision? (03)
- (b) Alpha Limited (AL) manufactures and sells products A, B and C. In view of limited production capacity, AL is meeting the demand for its products partly through imports.

The following information has been extracted from the budget for the next year:

	A	B	C
Machine hours used in production	240,000	225,000	270,000
	----- No. of units -----		
Sale	42,000	35,000	26,500
Production	30,000	25,000	22,500
Imports	12,000	10,000	4,000
	----- Rs. in million -----		
Sales	252.00	175.00	185.50
Cost of production:			
- Direct material	48.00	31.25	40.50
- Direct labour	45.00	40.00	56.25
- Variable overheads	33.00	25.00	29.25
- Fixed overheads	28.80	27.00	32.40
Cost of import of finished products	68.40	47.00	26.88

Additional information:

- (i) AL is working at 100% capacity.
- (ii) AL believes that it can obtain substantial quantity discounts from foreign suppliers if it increases the import volumes. Each product is supplied by a different supplier. After intense negotiations, the suppliers have offered discounts of 15%, 10% and 12% for products A, B and C respectively.

Required:

Prepare a product-wise plan of production/imports to maximise the company's profitability. (15)

- Q.6 Modern Engineering Workshop (MEW) is engaged in production of customised spare parts of textile machinery. The following information pertains to the jobs worked by MEW during the month of June 2014:

(i)

	Job 101	Job 202
Size of job order	4,000 units	5,000 units
	----- Rs. in '000 -----	
Opening work in process	15,000	-
Raw material consumed	10,000	31,000
Direct labour used (Rs. 100 per hour)	5,000	8,000

- (ii) Overheads are applied to jobs at Rs. 25 per direct labour hour. Under/over applied overheads are transferred to cost of sales.
- (iii) Job 101 was completed during the month and the goods were sent to the warehouse for delivery to the customer. During the transfer to the warehouse, 160 units were damaged. Net realizable value of the damaged units was Rs. 500,000. Remaining units were transferred to the customer.
- (iv) Job 202 is in process; however, 2,000 units are fully complete and were transferred to the warehouse during the month while 3,000 units are 70% complete as at 30 June 2014.
- (v) Actual overheads for the month of June 2014 amounted to Rs. 4,000,000.

Required:

Prepare journal entries to record the above transactions. (11)

- Q.7 (a) Briefly describe the following terms giving an example in each case: (02)
 (i) Incremental cost (02)
 (ii) Avoidable and unavoidable costs
- (b) Salman Limited (SL) has two production departments, PD-A and PD-B, and two service departments, SD-1 and SD-2. A summary of budgeted costs for the year ending June 2015 is as follows:

	PD-A	PD-B	SD-1	SD-2	Total
----- Rs. in '000-----					
Direct labour	5,400	3,648	-	-	9,048
Direct material	13,500	9,120	-	-	22,620
Indirect labour	1,900	600	50	20	2,570
Indirect materials	900	1,100	150	55	2,205
Factory rent	-	-	-	-	1,340
Power cost	-	-	-	-	1,515
Depreciation	-	-	-	-	3,500

Other related data is as follows:

	PD-A	PD-B	SD-1	SD-2
Production (units)	2,250	800	-	-
Direct labour hours (per unit)	20	38	-	-
Machine hours	19,250	12,250	2,800	700
Kilowatt hours (000)	800	600	50	150
Floor area (square feet)	5,000	4,000	500	500
Basis of overhead application	Machine hours	Direct labour hours	-	-

SL allocates the costs of service departments applying repeated distribution method. Details of services provided by SD-1 and SD-2 to the other departments are as follows:

Service Departments	PD-A	PD-B	SD-1	SD-2
SD-1	30%	65%	-	5%
SD-2	55%	35%	10%	-

Required:

Compute the departmental overhead absorption rate.

(10)

(THE END)