THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations Winter 2005

DECEMBER 06, 2005

MANAGEMENT ACCOUNTING

(MARKS 100)
(3 hours)

Q.1 ARS Auto Parts Limited is an established supplier of spare parts to a well known automobile manufacturer. The Company has been offered the choice of making either Component A or Component B for the next quarter but not both. The buyer has agreed to buy any number of units which ARS may produce.

Both the components use the same material of which 52000 kgs only are available at Rs.5,000 per kg. The components are made by passing through two machines T1 and T2 whose capacities are limited. The following data is available for the coming quarter:

	Component A	Component B
Material usage (per unit)	2.5 kg	2.5 kg
Target Selling price (per unit)	Rs.80,000	Rs.76,000
Machine Time (per unit)		
T1	0.80 hour	0.45 hour
T2	0.50 hour	0.60 hour

	Machine Details	
	T1	T2
Hours available	16000 hours	18000 hours
Variable overheads (per machine hour)	Rs.32,000	Rs.40,000

Required:
Calculate which component should be made in the next quarter to maximize contribution. **(13)**

Q.2 A company is planning to undertake a large project for which the following data is available:

Activity	Immediately Preceding activity	Time Estimates (Days)		
		Optimistic	Pessimistic	Most likely
A	-	10	26	15
B	-	28	28	28
C	A	20	42	25
D	B	16	20	18
E	C	27	43	38
F	C	39	49	44
G	C, D	31	31	31
H	F, G	37	43	37
I	E	34	36	35
J	I	23	35	26
K	H	10	10	10

Required:

(a) Represent the above project by means of a network diagram; and
(b) Determine the critical path and its duration. **(1**

Q.3 ABC Limited manufactures a single product and uses standard marginal costing system. The standard cost data for the product is as follows:

Standard data per unit	Rupees
Selling price	2,000
Direct material (4 kgs at Rs.50)	200
Direct labour (5 hours at Rs.60)	300
Variable overheads (5 hours at Rs.75)	375

The average production volume per quarter is 1000 units but during the quarter ended September 2005 only 800 units were made and sold. At the end of the quarter the following variance statement was prepared:

	Budget (1000 units)	Actual (800 units)	Variance	
	Rupees	Rupees	Rupees	
Sales	2,000,000	1,856,000	144,000	Adv
Less: Variable Costs				
Direct material (Note 1)	200,000	177,320	22,680	Fav
Direct labour (Note 2)	300,000	259,200	40,800	Fav
Variable overheads	375,000	323,700	51,300	Fav
Total variable costs	875,000	760,220	114,780	
Contribution	1,125,000	1,095,780	29,220	Adv
Less: Fixed costs	800,000	770,780	29,220	Fav
Profit	325,000	325,000	-	

Note-1 3410 kgs of material was used.
Note-2 4050 labour hours were used.

After studying the above variance statement, the Managing Director of the company was astonished that all the cost variances were favourable, although, as he understood, there had been some production problems. Further, the statement of Sales Manager that sales department showed excellent performance during the last quarter, seemed at odds with the above variance statement.

Required:

(a) Provide a statement to the Managing Director, reconciling budgeted contribution and actual profit by inserting volume, efficiency and price variances to enable him to understand the sales and production performance.

(b) Using the above statement, explain briefly to the Managing Director the key aspects of the performance of the sales and production departments. **(20)**

Q.4 A company manufactures a single product which passes through two processes. Outp
Process 1 is passed to Process 2 where further material is added to the mix. Details of t
process costs for the month ended November 30, 2005 are as follows:

	Process 1	**Process 2**
Direct material		
18000 kgs @ Rs.3/- per kg	Rs.54,000	
16000 kgs @ Rs.7/- per kg		Rs.112,000
Direct labour	Rs.38,980	Rs. 25,168
Applied overheads		
455 machine hours @ Rs.200/- per hour	Rs.91,000	
190 machine hours @ Rs.320/- per hour		Rs. 60,800
Output details:		
Expected	80% of input	80% of input
Actual (units)	15,000	24,300

There is no work in process and finished stock at either the beginning or the end of the period.

The scrap material of Process 1 is sold at Re.1 per kg and that of Process 2 at Rs.2.50 per kg.

Required: Calculate the amount of abnormal loss/gain in each process. **(07)**

Q.5 The following budgeted information of AJFA Limited for the year 2005 is provided to you:

		DVD Player	TV Set	Hi-Fi System
Sales and production (units)		50,000	40,000	30,000
Selling price (per unit)	Rs.	4,500	9,500	7,300
Prime cost (per unit)	Rs.	3,200	8,400	6,500
		Hours	Hours	Hours
Machine department (machine hours per unit)		2	5	4
Assembly department (direct labour hours per unit)		7	3	2

Recovery of overheads allocated and apportioned to machine and assembly departments including service centre costs is to be made at the following rates:

Machine department at Rs.120 per machine hour
Assembly department at Rs.8.25 per direct labour hour

The details of the overheads for the year are as follows:

	Rs. '000'
Machining services	35,700
Assembly services	31,800
Set-up costs	2,600
Order processing	15,600
Purchasing	8,400
	94,100

You have also been provided with the following estimates:

	DVD Player	TV Set	Hi-Fi System
Number of set-ups	120	200	200
Number of orders by the customers	8,000	8,000	16,000
Number of orders to the suppliers	3,000	4,000	4,200

Required:

(a) Prepare product-wise income statements using:
- Absorption costing
- Activity based costing **(19)**

(b) Briefly comment on the difference between the results obtained under the above alternatives. **(03)**

Q.6 Niaz Group is operating a five star hotel in Lahore. Its Financial Controller has worked out the following information for the forthcoming year:

	Room occupancy
January - March	45%
April - June	60%
July - September	90%
October - December	55%

The hotel has three main profit centres from which a revenue of Rs.1.2 billion is expected. This can be allocated on the following basis:

Accommodation 45%; Restaurant 35%; Bar 20%.

The gross margins relating to profit centres are:

	Accommodation (%)	Restaurant (%)	Bar (%)
Revenue	100	100	100
Cost of sales (material)	-	40	50
Wages	20	30	15
Direct costs	10	10	5
	30	80	70
Gross margin	70	20	30

Fixed costs and capital employed are estimated at Rs.226 million and Rs.2,800 million respectively.

Management is concerned about the low return on capital employed. The Financial Controller has therefore come up with the following alternative recommendations:

(i) A special two night holiday package is offered at Rs.10,000 per night. These customers are further expected to spend an amount equal to 40% of the accommodation charges in restaurant and 20% in the bar.

(ii) Increase restaurant prices by 10% and bar prices by 5% and also accommodation prices, assuming no drop in the volume of sales.

Required:

(a) Calculate return on capital employed before tax as presently budgeted.

(b) Calculate:

(i) How many two-night holidays would need to be sold each week in the three off-peak quarters to improve the return on capital employed (ROCE) by a further 4% above the percentage calculated in (a) above.

(ii) By what percentage the prices of accommodation would need to be increased to achieve the desired increase of 4% in ROCE. **(15)**

Q.7 A company made the following estimates at the beginning of the year 2004 for one of the components they use:

Annual usage	100,000 units
Ordering costs	Rs.5,000 per order
Annual carrying costs	Rs.10 per unit per annum

Throughout the year the company used the EOQ based on the above data for reordering but the actual usage of components turned out to be 25% higher.

Required:

(a) Calculate the total cost associated with stock.
(b) Calculate the amount that could have been saved if the correct EOQ had been used. **(09)**

(THE END)