Spring (Summer) 2010 Examinations

Wednesday, the 19th May 2010

MANAGEMENT ACCOUNTING - DECISION MAKING - (S-502)
STAGE – 5

Time Allowed – 2 Hours 45 Minutes **Maximum Marks – 90**

(i) Attempt all questions.
(ii) Answers must be neat, relevant and brief.
(iii) In marking the question paper, the examiners take into account clarity of exposition, logic of arguments, effective presentation, language and use of clear diagram/ chart, where appropriate.
(iv) Read the instructions printed inside the top cover of answer script CAREFULLY before attempting the paper.
(v) Use of non-programmable scientific calculators of any model is allowed.
(vi) DO NOT write your Name, Reg. No. or Roll No. anywhere inside the answer script.
(vii) Question No.1 – "Multiple Choice Question" printed separately, is an integral part of this question paper.

Marks

Q. 2 Classic Chemical Industries is engaged in manufacturing four products, has prepared the following budget for 2010:

	Washing Powder	Detergent Powder	Bleaching Powder	Rust Remover
Production – Kgs	20,000	5,000	25,000	15,000
Selling price – Rs./ Kg	65.25	110.25	132.75	192.00
Direct materials – Rs./ Kg	18.00	40.50	31.50	72.00
Direct labour – Rs./ Kg	22.50	30.00	54.00	72.00
Variable overheads – Rs./ Kg	6.75	15.00	18.00	19.50
Fixed overheads Rs. per annum	225,000	75,000	675,000	540,000

When the budget was discussed, it was proposed that the production should be increased by 10,000 Kgs, for which capacity existed in 2010.

It was also decided that for the next year, i.e., 2011, the production capacity should further be increased by 25,000 Kgs, over and above the increase of 10,000 Kgs, as given above for 2010. The additional production capacity of 25,000 Kgs, should be used for the manufacture of Detergent Powder for which new production facilities were to be created at an annual fixed overhead cost of Rs.105,000. The direct material costs of the four products were expected to increase by 10% in 2011 while the other costs and selling prices would remain the same.

Required:

(a) Find the profit for 2010 on the assumption that the existing capacity of 10,000 Kgs, is utilized to maximize the profit. 08

(b) Prepare a statement of profit for 2011. 04

(c) Assuming that the increase in the output of Detergent Powder may not fully materialize in the year 2011, find the quantity of Detergent Powder, to be sold in 2011 to earn the same overall profit as earned in 2010. 03

PTO

Marks

Q. 3 M/s Technoplast International Limited having a capacity of moulding and machining 4,800 tonnes of special material per annum which passes through two production departments Moulding and Machining. The sales forecast for the next financial year envisages full utilization of production capacity in the following territories:

Northern Zone: 3,000 tonnes @ Rs.750,000 per tonne
Southern Zone: 1,800 tonnes @ Rs.1,000,000 per tonne

Over the years the company has established three possible sources of raw material as under:

KOREA	CHINA	TAIWAN
Agrees to supply, 3,600 tonnes of input materials @ Rs.300,000 per tonne	Offers to supply 4,000 tonnes of input materials @ Rs.275,000 per tonne	Agrees to supply @ Rs.325,000 per tonne. If the entire input requirement is taken from them they will offer a discount of 5%
The additional cost of freight etc., for bringing the input materials from suppliers' origin is as under:		
Rs.10,000 per tonne to be spent by M/s Technoplast	Rs.15,000 per tonne to be spent by M/s Technoplast	The transport cost is to be paid by the supplier

- The average level of scrap arising from the two production departments Moulding and Machining are 5 % and 10% respectively which is calculated on the final output.
- The realizable value of scrap which is used by local moulders is sold out @ Rs.75,000 per tonne for Moulding Department and @ Rs.100,000 per tonne for Machining Department. This realization is credited to the cost of production.
- Budget for the departmental cost for the next year are as under:

Rs.(million)

	Moulding Department	Machining Department
Direct Labour	8.00	24.00
Overheads	32.00	72.00

Required:

Work out the following:

(a) Gross quantity of input material required to be produced. 02

(b) Selection of the source of the procurement and the price at which this input is to be procured. 06

(c) Total profitability for the next year assuming a distribution cost of 15% on cost of production. 12

Q. 4 **(a)** Describe supply chain management (SCM), its functions and benefits. 08

(b) M/s Falcon Corporation can produce and sell any one of its products Alpha, Beta and Gama during the year. Their Manager Finance has submitted the following tentative budget for the month of June 2010:

	ALPHA	BETA	GAMA
No. of units to be produced and sold (units)	10,000	14,000	17,000
			Rupees
Direct material cost	120,000	105,000	153,000
Direct labour cost	60,000	126,000	127,500
Variable overheads	30,000	42,000	76,500
Fixed overheads	450,000	450,000	450,000
Profit	48,000	54,000	60,000

Marks

The budget was duly discussed and deliberated upon, during budget meeting. It was suggested by the Director Finance that the element of uncertainty in forecasting should not be ignored, though each product in any quantity could readily be sold in the market. The production figures were weighed against their probability factors as given under:

ALPHA		BETA		GAMA	
Production units	Probability	Production units	Probability	Production units	Probability
14,000	0.6	18,000	0.4	13,000	0.1
12,000	0.1	16,000	0.2	18,000	0.7
11,000	0.3	15,000	0.4	16,000	0.2

Required:

Advise the company, which product should be produced and sold during the budget period. 10

Q. 5 Gulfam Printing Limited is considering the purchase of a new printing machine which will carry out some additional operations presently performed manually. Semi automatic and fully automatic are two alternative models. Following information are available for both models:

	Semi Automatic Machine	Fully Automatic Machine
Estimated life of machine (years)	5	6
Cost of machine (Rs.)	1,200,000	2,000,000
Cost of indirect materials (Rs.)	48,000	64,000
Estimated savings in scrap (Rs.)	80,000	120,000
Additional cost of maintenance (Rs.)	152,000	216,000
Estimated savings in direct wages:		
Employees not required (No.)	150	200
Wages per employee (Rs.)	4,800	4,800

Taxation is to be regarded as 50% of profit (ignore depreciation for calculation of tax).

Required:

(i) Prepare a profitability statement. 11

(ii) Work out the payback period in respect of each machine. 02

(iii) Which model of machine do you recommend to buy? State your reasons. 01

Q. 6 National Appliances Limited a household appliances manufacturer is considering the introduction of a new product. Generally, the company's products have a life of about five years, after which they are usually dropped from the range of products the company sells.

The new product envisages the purchase of a new machine costing Rs.10,000,000 including freight and installation charges. The useful life of the equipment is five years, with an estimated salvage value of Rs.3,937,500 at the end of that time. The machine will be depreciated for tax purposes by the reducing balance method at a rate of 15% on the book value.

The new product will be produced in a factory which is already owned by the company. The company built the factory some years ago at Rs.3,750,000. The book value on the written down value basis is zero rupee.

Today the factory has a resale value of Rs.8,750,000 which should remain fairly stable over the next 5 years. The factory is currently being rented to another company under a lease agreement which has 5 years to run, and which provides for an annual rental of Rs.125,000. Under the lease agreement, if the lessor wishes to cancel the lease, he can do so by paying the lessee compensation equal to one year's rental payment. This amount is not deductible for income tax purposes.

Additions to current assets will require Rs.562,500 at the commencement of the proposal which, it is assumed, is fully recoverable at the end of year 5. The company will have to spend Rs.1,250,000 in year 1 towards market research.

Marks

The net cash inflows from operations before depreciation and income tax are given below:

Year	Rs.
1	5,000,000
2	6,250,000
3	8,125,000
4	7,500,000
5	3,750,000

It may be assumed that all cash flows are received or paid at the end of each year and that income tax is paid in the year in which the inflow occurred.

The company's tax rate may be assumed to be 50% and the company's required rate of return after tax is 10%.

Required:

Evaluate the proposal thoroughly and present your findings (show all computations). 23

THE END

PRESENT VALUE FACTORS											
Year	**5%**	**6%**	**7%**	**8%**	**9%**	**10%**	**11%**	**12%**	**13%**	**14%**	**15%**
1	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870
2	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756
3	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658
4	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572
5	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497
6	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432
7	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376
8	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327
9	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284
10	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247