

M.Com. 3rd Semester Examination, 2010

ADVANCED MANAGEMENT ACCOUNTING

PAPER—CM-2105 (AF)

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

UNIT—I

[Marks : 20]

1. Answer any two of the following questions : 5 × 2

(a) What is Management Accounting? How does it help management? 2 + 3

(b) What is capital rationing? What are the factors leading to capital rationing? 2 + 3

(Turn Over)

(c) Delta Corporation is considering an investment in one of the two mutually exclusive proposals :

Project A : It involves initial outlay of

Rs. 1,70,000

Project B : It involves initial outlay of

Rs. 1,50,000

The certainty equivalent approach is employed in evaluating risky investments. The current yield on treasury bills is 5% and the company uses this as riskless rate. The values of net cash inflows with their respective certainty equivalents are :

Year	Project A		Project B	
	Cash in Flows (Rs.)	Certainty equivalent	Cash in Flows (Rs.)	Certainty equivalent
1	90,000	0.8	90,000	0.9
2	1,00,000	0.7	90,000	0.8
3	1,10,000	0.5	1,00,000	0.6

Required :

(i) Which project should be preferable to the company ?

(ii) Which project is riskier and why? 3 + 2

(d) "The differing assumption about the reinvestment rate generates contradiction between NPV and IRR method in case of ranking." What do you understand by reinvestment rate? Write down the assumptions about the reinvestment rate in NPV and IRR method.

5

2. Answer any *one* of the following questions : 10 × 1

(a) Consider the following ten investment projects :

<u>Project</u> (j)	<u>Net Present value</u> (NPV _j)	<u>Cash Outflow</u> in year-1 (CF _{j1})	<u>Cash Outflow</u> in year-2 (CF _{j2})
1	55	75	40
2	75	80	85
3	50	75	8
4	60	35	100
5	105	80	160
6	12	20	9
7	60	70	5
8	120	155	100
9	50	55	20
10	40	10	90

The budget constraints for year 1 and 2 are 400 and 350 respectively. The following project interdependencies exist :

- (i) Projects 3 and 7 are mutually exclusive.
- (ii) Out of the set of projects 5, 8, 9 and 10 at least two must be accepted.
- (iii) Project 6 is a prerequisite for project 2.
- (iv) Project 8 can be delayed by one year. Such a delay would shift the cash outflows by one year and reduce the NPV of project by 20.
- (v) Projects 4 and 5 are complementary. If two one accepted together, the total cash outflows will be 5 per cent less and the NPV will be more by 8 per cent.
- (vi) If project 8 is accepted, project 9 must also be accepted. Develop an Integer Linear Programming formulation of the above problem.

- (b) A firm is considering a proposal for purchase of a new machine requiring an outlay of Rs. 150 lakhs. Its estimated cash flow for three-year life of the machine is given below :

Year-1		Year-2		(Rs. in lakhs) Year-3	
Cash Flow	Probability	Cash Flow	Probability	Cash Flow	Probability
80	0.1	80	0.2	120	0.2
60	0.2	70	0.3	90	0.5
40	0.4	60	0.3	60	0.2
20	0.3	50	0.2	30	0.1

The probability distribution is assumed to be independent. Risk-free rate of interest is 5%.

Required :

(i) Calculate the expected NPV of the project.

(ii) The standard deviation of expected NPV of the project.

4 + 6

UNIT—II

[Marks: 20]

3. Answer any two of the following questions : 5 × 2

(a) What do you understand by Responsibility Accounting? What are the different responsibility centres? Briefly explain any one.

1 + 1 + 3

- (b) Write down the different applications of 'learning curve'. 5
- (c) Explain briefly the empirical model developed by Altman to predict corporate sickness. 5
- (d) What are the general causes of industrial sickness? 5

4. Answer any *one* of the following questions : 10 × 1

- (a) Honest company has got an order to deliver a new product of 30 units for first time. So far it has completed 50% of the order employing 298 labour hours. The time taken for producing the first unit was 30 hours. The production manager was little confused about the learning effect and he estimated a learning of 90% for this type of work.

The company uses standard absorption costing system. The direct costs attributable to the centre in which the units are manufactured are as follows :

Direct materials	Rs. 30.00 per unit
Direct labour	Rs. 5.00 per hour
Variable overhead	Rs. 1.00 per direct labour hour
Fixed Overhead	Rs. 6,000 per four-week operating period

There are ten workers, working a five-day week, eight hours per day. Personal and other allowances account for 25% of the total available time.

The company usually quotes a four-week delivery period for orders.

Required:

- (i) Verify whether the estimation of 9% learning effect is a reasonable one in this case.
- (ii) Calculate the cost of production of the initial order of 30 units.
- (iii) If the company gets a successive order of 20 units estimate the number of direct labour hours likely to be required for the second order.

[Given : $\log 2 = 0.3010$	Anti log of
	$1.2982 = 19.8710$
$\log 3 = 0.4771$	Anti log of
	$1.2187 = 16.5463$
$\log 5 = 0.6989$	Anti log of
	$1.2524 = 17.8813$]

3 + 4 + 3

(b) (i) A large company is organized into several manufacturing divisions. Division *X* of the company buys all of its requirements of raw materials *R* from the sister Division *Y*. The full manufacturing cost of *R* for Division *Y* is Rs. 88 per kg at normal volume. Till recently Division *Y* was willing to supply *R* to Division *X* at a transfer price of Rs. 80 per kg. The incremental cost of *R* for Division *Y* is Rs. 76 per kg. Since Division *Y* is now operating at its full capacity, it is unable to meet the outside demand for *R* at its market price of Rs. 100 per kg. Division *Y*, therefore, threatened to cut off supply to Division *X* unless the later agrees to pay the market price.

Division *X* resisting pressure because its budget based on the consumption of 1,00,000 kgs of *R* per month at a price of Rs. 80, is expected to yield a profit of Rs. 25,00,000 per month.

Division *X* has found an alternative source for a substitute material, available at a price of Rs. 95 per kg. Alternatively, Division *X* is ready to pay Division *Y* even the full manufacturing cost of Rs. 88 per kg.

Required:

- (1) Using each of the transfer prices of Rs. 80, Rs. 88, Rs. 95 and Rs. 100, show the financial results of
 - (I) Manager of Division X
 - (II) Manager of Division Y
 - (III) The Company as a whole.
 - (2) Comment on the effect of each of the transfer price on the performance of the manager of Division X and Division Y.
- (ii) Write a brief note on 'Negotiated transfer price'. (4 + 3) + 3

[*Internal Assessment: 10 Marks*]