

**2014**

**M. COM.**

**3rd Semester Examination**

**ADVANCED MANAGEMENT ACCOUNTING**

**PAPER — COM-305 (AF)**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full 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 : 5×2**

- (a) Management accounting aims at providing financial results of business to the management for taking decision” Explain.
- (b) Do you think that Internal rate of return (IRR) method is a rational capital budgeting method for project selection ? Explain.

*(Turn Over)*

(c) Consider the following eight investment projects :

Project (j)	Net Present Vale $(NPV_j)$	Cash flow in year-1 $(CF_{j1})$	Cash flow in year-2 $(CF_{j2})$	Cash flow in year-3 $(CF_{j3})$
1	50	70	55	60
2	70	65	75	60
3	45	70	40	45
4	55	35	45	55
5	100	70	120	90
6	17	20	16	18
7	55	70	48	42
8	115	100	70	85

The budget constraints for the year-1, Year-2 and Year-3 are 300, 200 and 175 respectively. The following project interdependencies exist :

- (1) Projects 3 and 6 are mutually exclusive.
- (2) Out of a set of projects 2, 5 and 7 at least two must be accepted.
- (3) Project 6 is a pre-requisite for project 8.
- (4) Projects 2 and 8 are complimentary. If two are accepted together, the total cash flow will reduce by 20% and the NPV will increase by 10%.

Develop an Integer Programming formulation of the above Capital Retioning problem.

(d) (i) With the help of the following information, calculate the certainty equivalent coefficients,  $b_t$ , at which risk adjusted net present values  $NPV_{RADR}$  and  $NPV_{CE}$  will be equal.

(ii) Reconcile your result.

Initial Capital outlay	Rs. 2,50,000
Forecasted cash inflows in	
Year-1	Rs. 1,50,000
Year-2	Rs. 1,00,000
Year-3	Rs. 1,20,000

The risk free rate is 8% and the estimated risk premium (a + u) for the project is 3%.

2+3

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

(a) Delta Corporation is considering an investment proposal (the Delta Project), to expand one of its product lines. The project is planned to start at the beginning of 2015. An initial outlay of Rs. 10,00,000 is required to start the project. The estimated life is 8 years with no salvage value at the end. The depreciation rate is 12.5% per annum on the original cost of the project.

An upgradation will be required at the end of 3rd year, costing Rs. 5,00,000 and will be depreciated on straight line basis for rest of the project life.

The forecasted profits before depreciation and taxes estimated through time-trend regression are as follows :

Year :	2015	2016	2017	2018	2019	2020	2021	2022
EBDT (Rs)	1,50,000	1,75,000	1,90,000	3,10,000	3,25,000	4,00,000	3,50,000	3,00,000

The requirements of working capital at the beginning of each year are as follows :

Year :	2015	2016	2017	2018	2019	2020	2021	2022
W.C. : (Rs)	4,000	5,000	6,200	7,200	8,000	8,600	6,000	0

Assume corporate tax rate as 30% and cost of capital of the firm as 12%.

Evaluate the acceptability of the Delta Project with any of the rational capital budgeting methods. 10

- (b) (i) Write down Markowitz mean variance rule of selection of project under condition of risk and uncertainty.
- (ii) A firm is considering a proposal to purchase a new machine requiring an initial outlay of Rs. 1,500 lakhs. The estimated cash flow for 3 years from the machine are given below :

Year-1		Year-2		Year-3	
Cash Flow (Rs. lakhs)	Probability	Cash Flow (Rs. lakhs)	Probability	Cash Flow (Rs. lakhs)	Probability
800	0.1	800	0.1	1200	0.2
600	0.2	700	0.3	900	0.5
400	0.4	600	0.4	600	0.2
200	0.3	500	0.2	300	0.1

Cash flow of different years are assumed to be independent cost of capital is assumed to be 5%.

Determine :

- (A) the expected NPV of the project.
- (B) the standard deviation of expected NPV.
- (C) the probability that NPV will be positive.

2+8

## Unit—II

[Marks : 20]

3. Answer any *two* of the following questions : 5×2
- (a) Define 'Corporate Sickness' as per Companies Act-2013. Mention any six indications of corporate sickness. 2+3
- (b) What do you understand by inter-divisional transfer pricing? Write down the benefits of a sound transfer pricing policy to a decentralized organisation. 1+4
- (c) Write down the application of 'Learning Curve' concept to a manufacturing company. 5
- (d) XYZ Ltd pursues the policy of managerial autonomy for its various divisions.

The Manufacturing Division of XYZ Ltd had redesigned many of its products. Consequently the division requires 50,000 units of product X, which is produced by the Component Division of the company. The Component Division markets the product at Rs. 50 per unit. Product X requires 4 hours of production time and has a unit material cost of Rs. 16. The Component Division has a productive capacity of 18,00,000 labour hours per year. It is operating at 90% capacity now. The total conversion cost in the division amounts to Rs. 6 per labour hour plus Rs. 20,00,000 per annum.

*Required :*

- (i) to find the highest price the Manufacturing Division can afford to pay for product-X.

- (ii) to find the lowest possible price at which the Component Division can afford to sell product-X. 2+3

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

- (a) Amaan Company sells a range of products in four district of North Bengal. Each district is under the responsibility of individual sales managers. The managers has autonomy to increase or decrease the catalogue price upto a certain level by offering discount or levying surcharge. Sales quotes are fixed by the company on quarterly basis for the four districts. The sales managers of each districts get a fixed monthly salary of Rs. 10,000 per month and a 4% commission on their actual orders booked. The quantum of commission earned serves as an indication of the efforts made by the sales managers. The newly appointed Cost Accountant of the company has devised MIS for quarterly appraised and the following figures are called out from his record :

Quarter ended March, 2014

Salesmen	A	B	C	D
	Rs.	Rs.	Rs.	Rs.
Salary and Commission earned	71,280	72,920	73,080	70,800
Standard Cost of				
Quota Sales	6,30,000	6,85,000	6,00,000	6,25,000
Selling Price variance	8,000(A)	20,000(A)	23,000(A)	25,000(F)
Sales volume variance	10,000(A)	7,000(A)	50,000(F)	5,000(A)
Contribution Margin	12,000(A)	18,000(A)	10,000(A)	20,0900(F)
Mix Variance				

*Required :*

- (i) Compute the sales quotas given to each sales manager and actual contribution earned by them.
- (ii) Rank the managers according to the performance, explaining the basis.
- (iii) comment on the use of commission as an incentive measure.

4+2+4

- (b) X Company is facing difficulty in its budgeting process as it is unable to find the learning effect as new products are introduced.

An order of 30 units of a new product has been received by X Company. So far 14 have been completed. The first unit required 40 direct labour hours and a total 240 direct labour hours have been recorded to complete 14 units. The production manager assumes a learning effect of 80%. The company's cost data are as follows :

Direct Materials	Rs. 90 per unit
Direct Labour	Rs. 60 per hour
Variable Overhead	Rs. 5 per direct labour hour
Fixed Overhead	Rs. 18,000 per four weeks of operation.

There are 20 labourers working in a five-day week and eight hours per day. Personal and other downtime allowances account for 25% of the total available time.

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

*Required :*

- (1) Examine whether the assumption of production manager about 80% learning effect is reasonable one.
- (2) Calculate the direct labour hour requirement for an expected second order of 20 units.
- (3) Calculate the estimated cost of production of the initial order of 30 units.

Given :	
log 2 = 0.301	Anti-log of 1.233 = 17.14
log 3 = 0.477	Anti-log of 1.126 = 13.38
log 5 = 0.699	Anti-log of 1.055 = 11.35
log 14 = 1.146	

3+3+4

***[Internal Assessment : 10 Marks]***

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