

**2016**

**DDE**

**M.Sc. Part-II Examination**

**COMMERCE**

**PAPER—VIII**

**Full Marks : 100**

**Time : 4 Hours**

*The figures in the margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

*Write the answer question of each Half in separate books.*

**First Half**

**(Advanced Cost Accounting)**

**[Marks : 50]**

**Answer Q. No. 1 and any two from the rest.**

**1. Answer any four of the following :**

**5×4**

- (a) Pass Journal entries in the cost books, maintained on non-integrated system for the following :

*(Turn Over)*



(i) Issue of materials :	Direct	Rs. 550000
	Indirect	Rs. 150000
(ii) Allocation of wages :	Direct	Rs. 200000
	Indirect	Rs. 40000
(iii) Under/Over	Factory (Over)	Rs. 20000

absorbed Overheads :

Administration (under) Rs. 10000

(b) Write the major reasons of differences in Cost Profit and Financial Profit when Cost and Financial Books are maintained separately.

(c) A company produces its main product Pee and in course of its manufacture, a by-product Lee is produced, which after further processing has a commercial value. For the month of April 2015, the following are the summarized cost data :

Particulars	Joint expenses (Rs.)	Separate Expenses	
		Pee	Lee
No. of units produced		5000	3000
		Rs.	Rs.
Materials	80000	35000	8000
Labor	40000	25000	5000
Overheads	30000	20000	2000
Selling price per unit		80	20
Estimated Profit per unit on sale of Lee			5

The factory uses reverse cost method of accounting for by-products.

You are required to prepare statement showing the joint cost allocable to Pee and Lee.

(d) A fashion company manufactures ladies' wear. It planned to sell maxi skirts in one year at a price of Rs. 150, the cost of which is Rs. 70 each. During the year, out of the manufactured 15000 Skirts only 10000 were sold. Fashion has now changed and so it is not possible to sell the remaining stock. The Sales Manager finds two alternative courses of action. The skirts can be restyled as miniskirts or they can be sold as rejects. The cost of restyling will be Rs. 200000 and it is forecast that the miniskirts can be sold for Rs. 110 each ; while the scrap value of the off cuts will be Rs. 50000. If the company decides to sell the stock as rejects, the resulting proceeds will be Rs. 300000.

What will be your advice to the Sales Manager ?

(e) From the following information, calculate the Labour Cost Variance, Labour Rate of Pay Variance and Labour Efficiency Variance.  
Standard rate per hour Rs. 4 ; standard time per unit of output 20 hours ; units produced 500 ; actual hours worked 12000 and actual labour cost Rs. 38400.

2+1+2



- (f) From the following information of a company, calculate the materials variance :

Material	Standard	Actual				
	Qty. (Units)	Rate (Rs.)	Amount (Rs.)	Qty. (Units)	Rate (Rs.)	Amount (Rs.)
A	500	6	3000	7000	5	35000
B	400	9	3600	5000	10	50000
C	700	7	4900	10000	6	60000
Less :	1600		11500	22000		145000
Loss	100		—	2000		—
	1500		11500	20000		145000

2+2+1

- (g) Define Budget Manual. Write differences between Budgetary Control and Standard Costing. 2+3

- (h) Goodluck Ltd. is currently operating at 75% of its capacity. In the past two years, the levels of operations were 55% and 65% respectively. Presently, the production is 75000 units. The company is planning for 90% capacity level during 2015-16. The cost details are as follows :

	55%	65%	75%
	Rs.	Rs.	Rs.
Direct Materials	1100000	1300000	1500000
Direct Labour	550000	650000	750000
Factory Overheads	310000	330000	350000
Selling Overheads	320000	360000	400000
Administrative Overheads	<u>160000</u>	<u>160000</u>	<u>160000</u>
	<u>2440000</u>	<u>2800000</u>	<u>3160000</u>

Profit is estimated @ 25% on Sales

The following increase in costs is expected during the year :

Direct Material	10%
Direct Labour	8%
Variable Factory Overhead	5%
Variable Selling Overhead	3%
Fixed Factory Overhead	10%
Fixed Selling Overhead	12%
Administrative Overhead	10%

Prepare Flexible Budget for the period 2015-16.



2. Product X passes through three processes before it is transferred to finished stock. The following information is obtained for the month of July :

	Process-I	Process-II	Process-III	Finished Stock
	(Rs.)	(Rs.)	(Rs.)	(Rs.)
Opening Stock	5000	8000	10000	20000
Direct Material	40000	12000	15000	—
Direct Wages	35000	40000	35000	—
Manufacturing Overhead	20000	24000	20000	—
Closing Stock	10000	4000	15000	30000
Profit % on transfer	25%	20%	10%	—
Price to next process				
Inter-process profit for opening stock	—	1395	2690	6534

Stock in processes is valued at prime cost and finished stock has been valued at the price at which it is received from Process-III. Sales during the period were Rs. 400000.

Prepare Process Cost Accounts showing profit element at each stage and compute the realized profit amount.

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3. (a) Write the cost factors to be considered in make or buy decision in Marginal Costing.

- (b) What do you mean by product mix ? How the product mix decision is taken in Marginal Costing ?

7+(1+7)

4. In a manufacturing company sales budget reveals annual sales of three products, Product-A 9000 units, Product-B 15000 units and Product-C 14000 units. The Closing Stock of A 1000 units and C 2000 units. Opening Stock B 5000 units and C 4000 units. The products required more than one labour operations as detailed below :

Operations	Products		
	A	B	C
X	18 min	42 min	30 min
Y		12 min	24 min
Z	9 min	6 min	

The hourly rates for workers are Rs. 5 for X, Rs. 7 for Y and Rs. 8 for Z. Each worker is paid for 2200 hours in a year of which 200 hours are paid for holidays and break down of machines. Since the number of workers cannot be in fraction, but only in round figures ; some idle time can not be avoided.

Prepare necessary budgets to show direct labour cost of three products, indirect labour cost and total labour cost of each operation.

15



5. (a) Write the major factors to be considered before implementing Responsibility Accounting via responsibility centres.
- (b) Briefly explain the Return on Investment (ROI) and Residual Income (RI) methods used in inter-divisional transfer pricing fixation.
- (c) Write the limitations of implementing Responsibility Accounting. 5+8+2

**Second Half**

(Advanced Business Statistics)

[Marks : 50]

Answer Q. No. 6 and any two from the rest.

6. Answer any four of the following questions : 5×4

- (a) Give the classical definition of probability. State its limitations.
- (b) What is sample survey? Write down the advantages of sample survey over the population survey.
- (c) State the relative advantages and disadvantages of parametric hypothesis test over it's of non-parametric counterpart.

- (d) There are four trays of eggs, containing 30 eggs each. The numbers of spoiled eggs in the trays are 2, 0, 3 and 5 respectively. If you select one tray at random and then pick up one egg from your selected tray, then find the probability that your selected egg is a spoiled egg.
- (e) What is sampling distribution of a statistic? Briefly explain the concept of standard error of a statistic.
- (f) What do you understand by degree of freedom? What precautions would you take before making an inference applying  $\chi^2$ -test?
- (g) A manufacturer of television sets knows that on an average 5% of their product is defective. They sell television sets in consignment of 100 and guarantee that not more than 2 sets will be defective. What is the probability that a consignment of TV sets will fail to meet the guaranteed quality?  
[Given that  $e^{-5} = 0.0067$ ]
- (h) Write down the important properties of normal probability distribution.



7. (a) A speaks truth in 75% of cases, whereas B speaks truth in 80% in cases. If both of them are narrating a single incidence separately and independently, then find the chance that their arguments will contradict.

(b) A box contains 40 envelopes of which 25 are ordinary (not meant for air mail) and 16 are unstamped, while the number of unstamped ordinary envelopes is 10. What is the probability that an envelope chosen from the box is a stamped air-mail envelope?

(c) If two events A and B are independent, then prove that their complimentary events are also independent. 6+6+3

8. (a) Find the mean, variance, skewness and kurtosis of binomial distribution.

(b) In an examination there are total 20 multiple choice questions and each question has 4 alternative answers, out of which one is correct. A student must have to attempt all the questions in the examination. Four marks is given for each correct answers and one mark is deducted for every wrong answer. A student must secure at least 50% of the total marks to qualify the examination. Suppose that a student has not

studied at all so that he decides to select the answers to the questions on guess work, find the probability that he will qualify the examination. 8+7

9. (a) Briefly explain the method of maximum likelihood estimation for estimating an unknown parameter.

(b) State the important properties of a maximum likelihood estimator.

(c) Estimate the Poisson parameter  $\lambda$  by the maximum likelihood estimation method. 4+5+6

10. (a) A dice is rolled for 120 times and the number of points appeared on the upper face is recorded as below :

Face	1	2	3	4	5	6	Total
Frequency	16	24	18	20	23	19	120

Do you support the hypothesis that the dice is an unbiased dice? Test at 5% level of significance.

(Given that  $X^2_{0.05, 5} = 11.07$ )

(b) The systolic blood pressure (B. P.) of 10 persons has been measured on their both hands separately at the consecutive time. The recorded blood pressures of them are given below :



Person	1	2	3	4	5	6	7	8	9	10
B. P. (Left Hand)	132	146	135	141	139	162	128	137	145	151
B. P. (Right Hand)	136	145	140	137	142	160	134	136	149	158

Do you find any significant difference in blood pressure measured through two different hands?  
Test at 5% level of significance.

[Given that  $t_{0.025, 9} = 2.262$ ]

7+8

Face	1	2	3	4	5	6	Total
Frequency	10	24	18	10	20	19	120