

2017

DDE

M.Com. Part-II Examination

COMMERCE

PAPER—VIII

Full Marks : 100

Time : 4 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.

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 : 4×5

- (a) Pass the Journal entries of the following in Cost Book when books of accounts are maintained under integrated system.

(Turn Over)

- (i) Purchase of raw material valued ₹ 5,00,000 in cheque of S.B.I. on 03.04.2016.
- (ii) Direct material valued ₹ 2,00,000 issued to Production on 13.05.2016.
- (iii) Indirect wages of ₹ 70,000 paid for production on 20.06.2016.
- (iv) Administrative overhead ₹ 50,000 absorbed to Finished Product on 27.12.2016.
- (v) Sales in cheque of UBI ₹ 10,00,000 on 30.12.2016.
- (b) The net Profit of a Manufacturing Co. Ltd. appeared at ₹ 64,377 as per financial records for the year ended 31st December, 2016. The cost books however showed a net profit of ₹ 86,200 for the same period. A scrutiny of the figures from both the sets of accounts revealed the following facts :

	(₹)
Works overhead under recovered in costs	1,560
Administration Overhead Over recovered in costs	850
Depreciation charged in financial accounts	5,600
Depreciation recovered in costs	6,250
Interest on investment not included in cost	4,000
Loss due to obsolescence charged in financial accounts	2,850
Income tax provided in financial accounts	20,150
Bank interest and transfer fees in financial books	375
Stores adjustments (Credit in financial book)	237
Loss due to depreciation in stock values (charged in financial book)	3,375

Prepare a statement showing the reconciliation between the figures of net profit as per cost accounts and the figures of net profit shown in the financial books. 5

- (c) The budgeted cost of factory specialising in the production of a single product at the optimum capacity of 6,400 units per annum amounts to ₹ 1,76,048 as detailed below :

Fixed Cost	₹ 20,688
<u>Variable Costs :</u>	<u>₹</u>
Power	1,440
Repairs	1,700
Miscellaneous	540
Direct material	49,280
Direct labour	<u>1,02,400</u>
	<u>1,55,360</u>
	<u>1,76,048</u>

Having regard to possible impact on sales turnover by market trends the company decided to have a flexible budget with a production target 3200 units and 4,800 units. Prepare a flexible budget for production levels at 50% and 75% capacity. Assume selling Price per unit is maintained at ₹ 40 as at present, indicate the effect on net profit.

Administration, selling and distribution expenses continue at ₹ 3,600.

- (d) Write the major reasons of material and labour cost variances.
- (e) Explain the following terms in context of Process Costing
- (i) Joint Product ;

- (ii) By-Product ;
 (iii) Equivalent Production. 2+1+2
 (f) Define (i) Profit-volume ratio and (ii) Margin of safety in Marginal Costing. 3+2
 (g) Write the cost factors to be considered in Product mix decision in Marginal Costing.
 (h) Write a note on target costing.

2. From the following calculate necessary variances of Fixed overhead.

<u>Item</u>	<u>Budget</u>	<u>Actual</u>
No of working days	20	22
Man hours per day	8,000	8,400
Output for man hour in unit	1	0.9
Fixed Overhead Cost (₹)	1,60,000	1,68,000
Variable Overhead Cost (₹)	80,000	85,000
		10+5

3. An Engineering company, manufactures two products X and Y. An estimate of the number of units expected to be sold in the first seven months of 2018 is given below :

	<u>Product-X</u>	<u>Product-Y</u>
January	500	1,400

February	600	1,400
March	800	1,200
April	1,000	1,000
May	1,200	800
June	1,200	800
July	1,000	900

It is anticipated that :

- (a) there will be no W-I-Pat the end of any month ;
 (b) finished units equal to half the anticipated sales for the next month will be in the stock at the end of each month (including December, 2017).

The budgeted production and production cost for the year ending 31st December, 2018 are as follows :

	<u>Product-X</u>	<u>Product-Y</u>
Production (units)	11,000	12,000
Direct material per unit (₹)	12	19
Direct wages per unit (₹)	5	7
Other manufacturing charges apportionable to each type of product (₹)	33,000	48,000

You are required to prepare :

- (i) An production budget showing the number of units to be manufactured each month, and
- (ii) An summarised production cost budget for the 6 month period-January to June, 2018. 9+6

4. Product 'z' is obtained after it passes through three distinct processes. The following information is obtained from the accounts for the month ending 31st March, 2017.

	Total (₹)	Process		
		I (₹)	II (₹)	III (₹)
Direct Material	7542	2600	1980	2962
Direct Wages	9000	2000	3000	4000
Production Overhead	9000	—	—	—

1000 units at ₹ 3 each were introduced to process-I. There were no stock of material or W-I-P at the beginning or end of the period. The output of each process passes direct to the next process and finally to finished stores. Production overhead is recovered at 100% of direct wages.

The following additional data is obtained :

Process	Output during the month	% of normal loss to input	Value of scrap per unit (₹)
Process-I	950	5%	2
Process-II	840	10%	4
Process-III	750	15%	5

Prepare process cost accounts, normal and abnormal gain or loss accounts. 15

5. (a) Write the advantages of Responsibility Accounting Report to the management.
- (b) Explain the term 'Zero Based Budgeting' (ZBB).
- (c) Explain the divisional transfer pricing under cost plus profit basis. 4+6+5

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 : 4×5
 - (a) Explain the concept of probability distribution. Give two examples of how probability distribution is used in decision making process.

- (b) In a binomial distribution with 6 independent trials, the probabilities of 3 and 4 successes are found to be 0.2457 and 0.0819 respectively. Find the parameters 'p' and 'q' of the binomial distribution.
- (c) Prove that Poisson distribution is a limiting case of Binomial distribution under certain conditions.
- (d) Briefly discuss the procedure and applicability of multi-stage sampling with an example.
- (e) For two events A and B, if $P(A) = \frac{1}{2}$, $P(B) = \frac{1}{3}$, and $P(A \cap B) = \frac{1}{4}$, then find —

(i) $P(A \cup B)$

(ii) $P(A^C \cap B^C)$

(iii) $P(A^C \cap B)$

(iv) $P\left(\frac{A}{B}\right)$

(v) $P(A^C \cup B^C)$

1×5

- (f) Define the following terms with example.
- (i) Sample Space ;
- (ii) Mutually Exclusive Events ;
- (iii) Elementary Event. 2+2+1
- (g) What are the different methods of Point estimation ? Briefly explain any one of them. 1+4
- (h) It is believed that the red color jumbo-sized packs of Lay's Potato Chips have more weight than the similar blue color packs. For this purpose a random sample of 50 red and 40 blue packs taken from a stall are investigated. It is found that the red packs has an average weight of 95.10 grams with a standard deviation of 4 grams, while the blue packs has an average weight of 93.05 grams with a standard deviation of 2 grams. Do the data support the common belief of people ? Test at 5% level.
7. (a) A lock manufacturing company supplies locks to a retailer in different batches. A single batch size contains 300 locks. The company's past record suggests that on an average, in a single batch, 10

locks are defective. The number of defects per batch follows Poisson distribution. In a random selection of locks in a batch:

— what is the probability of finding eight or fewer defectives in a batch?

— what is the probability that the batch contains $6 < x < 10$ defectives?

(b) Time taken by a construction company to construct a flyover is a normal variate with mean 400 labour days and standard deviation of 100 labour days. If the company promises to construct the flyover in 450 days or less and agrees to pay a penalty of Rs. 10,000 for each labour day spent in excess of 450, what is the probability that :

— the company pays a penalty of at least Rs. 2,00,000?

— the company take at most 500 days to complete the flyover? 7+8

8. (a) What is the difference between a sample and a census, and why is sampling so important for a researcher?

(b) What is an error? Differentiate between sampling and non-sampling error. 7+(2+6)

9. (a) In the last winter, there were 100 major accidents on Kharagpur-Kolkata Highway between 6.00 AM to 10.00 AM. Out of those accidents, in 30 cases the days were foggy and in 40 cases the driver consumed alcohol. The chance that a driver consumes alcohol while driving on a foggy day is 0.20. As a news reporter you have started investigating one of such accidents. What is the probability that the particular accident was a normal accident (normal means that it was neither a foggy day nor the driver had taken alcohol).

(b) What do you understand by conditional probability and unconditional probability? State the Bayes' theorem for estimating conditional posterior probability.

(c) Two brothers Amaan and Ayaan are trying to solve a puzzle. The chance that Amaan will solve the puzzle is 0.2 and Ayaan will solve it is 0.15. Ayaan will get a chance only when Amaan fails to solve it. If Amaan starts to solve it then what is the chance that the puzzle will be solved? 5+(2+3)+5

10. (a) The sales of Idli Vada in three Stalls on Platform No. 1 of Kharagpur Railway Station during a particular week were as follows :

No of plates sold :

Days	Stall No.101	Stall No.102	Stall No.103
Sunday	98	95	85
Monday	115	110	105
Tuesday	102	100	96
Wednesday	105	97	100
Thursday	98	95	106
Friday	100	94	109
Saturday	102	100	101

Using One-way ANOVA test whether there is any significant difference in the average sales of Idli Vada in three Stalls ? Test at $\alpha = 0.05$. [Given : $F_{0.05, (2, 18)} = 3.49$].

- (b) 300 people of three age groups were asked their opinions of demonetization policy taken by Indian government and the responses were as follows :

Age Group →	20 - 35 years	36 - 50 years	51 - 65 years	Total
Supprted	80	30	60	180
Not Supprted	20	70	40	120
Total	100	100	100	300

Do you think that supporting of demonetization policy is independent of the age of the Indian people ? Test at $\alpha = 5\%$. [Given : $\chi^2_{0.05, 2} = 5.991$]

9+6