TED (15) – 3253

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

QUANTITATIVE TECHNIQUES

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Recite the meaning of statistical investigation.
2. Define mode.
3. State the term positive correlation.
4. List the features of index numbers.
5. Memorise the methods of weighted index numbers. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Explain the functions of statistics.
2. Describe the advantages and disadvantages of secondary data.
3. Find the value of mode from the following data :–

Value	*Frequency*
Below 50	97
,, 45	95
,, 40	90
,, 35	80
,, 30	60
,, 25	30
,, 20	12
,, 15	4

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Marks

4. Explain various methods of measurement of correlation.

5. Calculate Pearson's correlation of co-efficient between X and Y.

X :	2	4	6	8	10
Y :	5	9	13	17	21

6. Describe the problems in constructing index numbers.

7. Estimate simple aggregate index numbers.

Articles & Units	*Price (2005)*	*Price (2015)*
Rice in Kg.	8	12.5
Wheat in Kg.	6.25	10
Milk in Ltrs.	5.25	6
Egg in Dozen	10	16
Cheese in Kg.	15.10	18.5

(5×6 = 30)

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PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

Unit — I

III Describe the uses and limitation of statistics. 15

Or

IV Explain the methods of classification. Also explain the requisites of tabulation. 15

Unit — II

V Explain the various measures of central tendency. 15

Or

VI Calculate co-efficient of quartile deviation.

Marks :	0-20	20-40	40-60	60-80	80-100
Frequency :	8	12	13	20	10

15

Unit — III

VII Find co-efficient of correlation between X and Y.

X :	22	27	12	21	27	23	17
Y :	32	27	19	30	26	25	22

15

Or

Marks

VIII Calculate Spearman's rank correlation of co-efficient.

Series A :	115	109	112	87	98	98	120	100	98	118	
Series B :	75	73	85	70	76	65	82	73	68	80	15

UNIT — IV

IX Calculate Fisher's ideal index number and examine whether it satisfies time reversal test.

Commodity	*Base year*		*Current year*	
	p_0	q_0	p_1	q_1
A	6	15	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24

15

OR

X (a) Explain the significance of consumer price index numbers. 7

(b) Differentiate between Laspeyre's method and Fisher's ideal method of weighted index number. 8

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