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Question Paper Code: CMB005



**INSTITUTE OF AERONAUTICAL ENGINEERING**  
(Autonomous)

M.Tech I Semester End Examinations (Supplementary) - July, 2017

Regulation: IARE-R16

**STATISTICS FOR MANAGEMENT**  
(Master of Business Administration)

Time: 3 Hours

Max Marks: 70

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Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

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**UNIT – I**

1. (a) Explain the origin and development of statistics. [7M]  
(b) Explain the qualities of a statistician .Discuss the significance of statistical investigation. [7M]
2. (a) Examine the various functions of statistics and limitations of statistics. [7M]  
(b) Explain the scope of statistics .Explain the managerial implications of statistics. [7M]

**UNIT – II**

3. (a) Calculate the median and compute the mean deviation from the median. [7M]

Table 1

Class	frequency
0-10	5
10-20	8
20-30	12
30-40	15
40-50	20
50-60	14
60-70	12
70-80	6

- (b) Compute the quartile deviation and its coefficient from the Table 2. [7M]

Table 2

Class	frequency
0-100	12
100-200	18
200-300	35
300-400	42
400-500	50
500-600	45
600-700	20
700-800	8

4. (a) Calculate Bowley's coefficient of skewness for the data given in Table 3

[7M]

Table 3

CI	f
Below 99	1
100-109	14
110-119	66
120-129	122
130-139	145
140-149	121
150-159	65
160-169	34
170-179	12
180-189	5
190-199	2
200 and over	2

- (b) The median of the following distribution is known to be 25. Find the missing values in Table 4.

[7M]

Table 4

CI	f
0-10	3
10-20	X
20-30	5
30-40	Y
40-50	2
Total	20

**UNIT – III**

5. (a) Differentiate between classification and tabulation and explain the different types of classification. [7M]  
 (b) Represent the data given in Table 5 by means of a histogram. [7M]

Table 5

Monthly Income (Rs)	No:of workers
3000-3500	7
3500-4000	19
4000-4500	27
4500-5000	15
5000-6000	12
6000-8000	12
8000-10000	8

6. (a) Explain the various types of one dimensional diagrams. [7M]  
 (b) Explain the general rules for constructing diagrams. [7M]

**UNIT – IV**

7. (a) Explain the assumptions, properties and applications of t-test. [7M]  
 (b) Calculate the Spearman's rank correlation coefficient between the following 2 series shown in Table 6. [7M]

Table 6

Series A	Series B
57	113
59	117
62	126
63	126
64	130
65	129
55	111
58	116
57	112

8. (a) Differentiate between Karl Pearson's correlation co-efficient of Spearman's rank correlation. [7M]  
 (b) Perform a two way ANOVA on the data given in Table 7: [7M]

Table 7

Plots of land	Treatment A	Treatment B	Treatment C	Treatment D
I	38	40	41	39
II	45	42	49	36
III	40	38	42	42

**UNIT – V**

9. (a) Explain the characteristics and uses of index numbers. [7M]  
 (b) Fit a straight line to the following data given in Table 8 by least squares method. [7M]

Table 8

x	y
0	1
1	1.8
2	3.3
3	4.5
4	6.3

10. (a) Explain the significance of trend analysis and discuss the methods of estimating trend. [7M]  
 (b) For the following data given in Table 9 obtain the 2 regression equations. [7M]

Table 9

X	6	2	10	4	8
Y	9	11	5	8	7

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