



HCK-010-004708 Seat No. _____

Fourth Year B. H. T. M. (Sem. VII) (CBCS) Examination

September - 2017

7.6.E.3 : Business Statistics

(New Course)

Faculty Code : 010

Subject Code : 004708

Time : Hours]

[Total Marks : 70

- Instructions :**
- (1) Options, if any, are given.
 - (2) The maximum marks are assigned in front of each question.
 - (3) Students are allowed to use simple calculators.
 - (4) Students may be provided with graph papers on request.

1 The marks obtained by 25 students in F & B Production & F & B Service are given : 14

Roll No.	Production	Service	Roll No.	Production	Service
01	14	12	14	13	16
02	0	2	15	16	14
03	1	5	16	6	10
04	7	3	17	4	1
05	15	9	18	11	14
06	2	8	19	8	3
07	12	18	20	9	14
08	9	11	21	3	11
09	5	3	22	14	17
10	17	13	23	0	10
11	19	18	24	11	7
12	11	7	25	15	15
13	10	13			

Construct a bivariate continuous frequency distribution based on rules of standard statistics indicating Table Number, Title, Caption and Stub. (Hint: Value of Log 25 =1.3979)

2 Do as directed : 7+7=14

(A) Represent the following data of the distribution of income of leading company with pie-chart : 7

Particulars	(Rupees Lakhs)
Raw Materials	1689
Taxes	582
Manufacturing Expenses	543
Employees	470
Other Expenses	286
Depreciation	94
Dividends	75
Retained Income	51
Total	3790

(B) Draw both types of ogive curves representing the following figures : 7

Length of Service (In Years)	No. of workers	Length of Service (In Years)	No. of workers
0 – 5	5	20 – 25	32
5 – 10	12	25 – 30	6
10 – 15	25	30 – 35	1
15 – 20	48		

3 A food controller received samples of soups from two chefs. He had tested the samples for portion size with the following results. Find out which chef's soup portion size are more uniform? (Hint: Use standard deviation) 14

Volume (In ml)	Samples from Suppliers	
	A	B
150 – 160	3	10
160 – 170	42	16
170 – 180	12	26
180 – 190	3	8
Total	60	60

- 4 Using all the four moments, comment on the shape of the following frequency distribution indicating the pattern of overtime work done in a month by 100 employees of a company. (Hint: Use skewness for right or left skew and kurtosis for the shape) 14

<i>Overtime Hours</i>	10 – 15	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40
<i>No. of employees</i>	11	20	35	20	8	6

- 5 From the following data, estimate the sales corresponding to the advertising expenditure of Rupees 50 thousand : 14

Sales Revenue	Advertising Expenditure (In Rupees Thousands)			
(In Rupees Lakhs)	05 – 15	15 – 25	25 – 35	35 – 45
75 – 125	3	4	8	4
125 – 175	8	6	7	5
175 – 225	2	2	4	3
225 – 275	3	3	2	2