MBB-010-001407   Seat No. _____

B. B. A. (Sem. IV) (CBCS) Examination

March / April - 2018

Business Statistics - II

(Old Course)

Faculty Code : 010
Subject Code : 001407

Time : $2\frac{1}{2}$ Hours]   [Total Marks : **70**

1 (a) Explain Assignable causes in detail.   **7**

(b) The number of defects noticed in 20 cloth pieces   **7**
are given below : 1, 4, 3, 2, 4, 5, 7, 6, 2, 3, 2, 5, 7, 6,
4, 5, 2, 1, 3, 8. Decide whether the process is under
control ?

OR

1 A sample of 400 pens were taken daily for 15 days. The   **14**
number of defective pens are given below. Draw *np* and
p-chart and state the comment.

Date :	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Defective pens :	28	18	40	42	32	62	50	10	30	22	80	62	76	56	30

2 (a) Explain Input-output analysis.   **7**

(b) Find trend by 3-yearly moving averages for following   **7**
data :

Year :	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Value :	110	118	116	120	132	140	135	160	175	180	200

OR

2 Fit a second degree parabola to the following data and   **14**
estimate profit for 2004 :

Year :	1992	1994	1996	1998	2000
Profit :	12	4	6	11	8

3 (a) (i)   One tail, two tail.   **7**

(ii) Level of significant explain.   **7**

(b) A coin was tossed 100 times and head was obtained   **7**
48 times, can the coin be regarded as biased ?

OR

3 The following is a distribution of misprint in 100 pages :   **14**

Number of Misprint	0	1	2	3	4	5	6
Number of pages	11	31	26	17	10	4	1

Fit a Poisson distribution and test the goodness of fit.

4 (a) Explained pained t-test, and write a steps to test the   **7**
hypothesis.

(b) The following results are obtained from two   **7**
independent sample drawn from population. Test the
hypothesis that population variances are equal.

Sample	Size	S.D.
1	22	4.5
2	16	5.3

OR

4 From the following results test the hypothesis that there   **14**
is significant difference in means or not ?

Sample	Size	Average	Variance
A	8	120	49
B	12	135	38

5 (a) Explain game theory. **7**

(b) Determine the optional strategies for the players. **7**
Also find game value.

Player x

		x_1	x_2	x_3	x_4
	y_1	42	18	−5	20
Player y	y_2	20	20	0	18
	y_3	24	−15	−12	30

OR

5 (a) Write short note : **7**

(1) Saddle point

(2) Mixed strategies

(b) Solve the following game by algebraic method. **7**

Player B

		B_1	B_2
	A_1	1	−0.5
Player A	A_2	−0.5	0

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