

(A-1) Seat No: \_\_\_\_\_

No. of Printed Pages: 2

SARDAR PATEL UNIVERSITY

BBA SEMESTER (CBCS) IV EXAMINATION MAY 2016

SUBJECT: STATISTICS FOR MANAGEMENT II (UM04CBBA04/09)

(INC) (2010 BATCH)

Total Marks: 60

DATE: 10/05/2016, Tuesday

TIME: 10.30 AM TO 12.30 PM

Note: (i) Figures to the right indicate marks

(ii) Use of simple calculators is allowed

- Q.1(a) Explain (i) Population (ii) Sample (iii) Parameter and (iv) Statistic 7  
(b) State the characteristics of a good sample 8

OR

- Q.1(a) Distinguish between sample survey and population survey 7  
(b) Write note on (i) Simple random Sampling and (ii) Stratified Random Sampling 8

- Q.2(a) Explain the steps in the procedure of testing a hypothesis 7  
(b) A sample of size 400 was drawn and the sample mean was found to be 99. Test at 5% level of significance that this sample could have come from a normal population with mean 100 and variance 65. 8

OR

- Q.2(a) The following information is about the height of students of two colleges A and B. Are the difference standard deviations significant at 5% level of significant? 7  
College A: Mean height = 148 cm, SD = 6 cm, Sample size = 1000  
College B: Mean height = 150 cm, SD = 5.5 cm, Sample size = 1200  
(b) The mean of two large samples of sizes 1000 and 2000 are 67.5 and 68. Test the equality of means of the two populations each with SD 2.5 8  
(Use 5% level of significance)

- Q.3(a) Write note on (i) Degree of freedom and (ii) properties and applications of 't' tests 7  
(b) Price of shares of a company on the different days in a month were found to be 36, 35, 39, 40, 39, 41, 40, 33, 34 and 38. Discuss whether mean price of shares in the month is 35. (Use 5% level of significance) 8

OR

(1)

(P.T.O.)

- Q.3(a) Two different types of drugs 'A' and 'B' were tried on certain patients for increasing weight. 5 patients were given drug A and 7 patients were given the drug B. The change in weight (kg) is given below. Do the drugs significant with regard to their effect in increasing weight? ( Use 5% level of significance) 7
- Drug A: 4    6    7    5    3    -    -  
 Drug B: 6    5    7    8    4    5    7
- (b) A training of three months is given to 10 Officers and the improvement in their performance was recorded in terms of score as: -4, 6, -4, -20, 0, -10, -16, -2 and 6. Can it be concluded that the employees have benefited by training? 8  
 ( Use paired t test at 5% level of significance)
- Q.4(a) Write note on (i) ANOVA and (ii) Chi Squares tests 7
- (b) Given: 8
- (i) the computed value of Chi Square = 19.05  
 (ii) Degree of freedom = 4  
 (iii) Level of significance = 5%  
 Give your conclusion whether to accept or reject the null hypothesis? Why?

**OR**

The following data represent the number of units of production per day turned out by 5 workers using 4 machines: 15

- (i) Test whether the mean productivity is the same for the 4 machines  
 (ii) Test whether 5 workers differ with respect to mean productivity  
 ( Use 5% level of significance and code data by subtracting 36 from each value)

Worker	Machine			
	A	B	C	D
1	40	34	43	42
2	42	36	48	39
3	30	32	40	28
4	39	34	42	49
5	34	38	45	35

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