

ST. JOSEPH'S EVENING COLLEGE (AUTONOMOUS)**II SEMESTER M.COM EXAMINATIONS - APRIL 2019****BUSINESS RESEARCH METHODS - II****Duration: 2.5 Hours****Max. Marks: 70****SECTION - A****I) Answer any EIGHT of the following questions. (8x2=16)**

1. What do you mean by Type I and Type II Error?
2. State the application of T Test.
3. Write a note on Factor Analysis.
4. How is negative correlation different from positive correlation?
5. How do you calculate Standard error for a large sample?
6. Define Parametric test.
7. Differentiate between Correlation and Regression.
8. State the applications of Chi-square test.
9. Distinguish between one tail and two tail tests.
10. What is the level of significance in testing of hypothesis?

SECTION - B**II) Answer any THREE of the following questions. (3x8=24)**

11. Explain the need for Editing, Coding, Classifying and Tabulating in processing of data.
12. A departmental store gives in service training to its salesmen which is followed by a test.

Test Scores	14	19	24	21	26	22	15	20	19
Sales ('00 Rs.)	31	36	48	37	50	45	33	41	39

Calculate the Pearson's Correlation co-efficient.

13. A soap manufacturing company was distributing a particular brand of soap through a large no of retail shops. Before a heavy advertisement campaign, the mean sales per week per shop were 140 dozens. After the campaign, a sample of 26 shops was taken and the mean sales was found to be 147 dozens with S.D =16. Can you consider the advertisement effective?

Note: 5 % level significance df – 25 (26-1) = 1.708

14. A Survey done 10 years ago, of CPA's(Certified Public Accountants) in the U S found that their average salary was Rs. 74,194. An Accounting researcher would like to test whether over the years this average has increased or not? A Sample of 112 CPAs produced a mean salary of Rs. 78,695. Also given that the population standard deviation = Rs.14,530.

Note : 5 %level of significance is 1.645

What conclusion can be drawn with the above data?

15. Watching television also reduces the amount of physical exercise, causing weight gains. A sample of fifteen 10 years old children was taken. The number of pounds each child was overweight was recorded. (negative numbers indicates the child is underweight). Additionally the number of hours of television viewing per weeks was also recorded. These data are listed here.

TV (Hrs)	Over Weight
42	18
34	6
25	0
35	-1
37	13
38	14
31	7
33	7
19	-9
29	8
38	8
28	5
29	3
36	14
18	-7

Fit the regression line and describe what the coefficients tell you about the relationship between the two variables.

SECTION - C

III) Answer any ONE of the following questions.

(1x15=15)

16. Set up an analysis of variance (Anova) table for the following two way design results.

Varieties of Fertilizers	Varieties of Seeds		
	A	B	C
W	6	5	5
X	7	5	4
Y	3	3	3
X	8	7	4

Also state whether variety differences are significant at 5 % level.

Note:

Between columns - $F(2,6) = 5.14$

Between Rows - $F(3,6) = 4.76$

17. A research study was conducted to examine the differences between older and younger adults on perceived life satisfaction. A pilot study was conducted to examine this hypothesis. Ten older adults (over the age of 70) and ten younger adults (between 20 and 30) were give a life satisfaction test (known to have high reliability and validity). Scores on the measure range from 0 to 60 with high scores indicative of high life satisfaction; low scores indicative of low life satisfaction. The data are presented below.

Compute the appropriate t-test.

<u>Older Adults</u>	<u>Younger Adults</u>
45	34
38	22
52	15
48	27
25	37
39	41
51	24
46	19
55	26
<u>46</u>	<u>36</u>

18. What do you understand by 'Hypothesis Testing'? Deliberate the various hypothesis testing procedures.

SECTION - D

IV) Analyze the case and answer the questions.

(1x15=15)

19. Two researchers adopted different sampling techniques while investigating the same group of customers to find the number of customers falling in different buying intelligence levels.

Researcher	No. of customers in each level				Total
	Below average	Average	Above Average	Genius	
1	86	60	44	10	200
2	40	33	25	2	100
Total	126	93	69	12	300
<p>Are the two sampling techniques and buying intelligence significantly independent? (use 5 % significant level)</p> <p>Critical value at 5 % significant level (1,3) - 5.991</p>					