BRAINWARE UNIVERSITY

Coursework Examination 2018 – 19 (June 2019)

Programme – Doctor of Philosophy in Management/ Doctor of Philosophy in Commerce

Course Name – Research Methodology II

Course Code – PHD-MCRM02

Time allotted: 4 Hours **Full Marks : 100**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Objective Type Question) 10 x 1 = 10

1. *Answer the following*

(i) What is outlier?

(ii) What is content analysis?

(iii) Why scaling technique is important in questionnaire designing?

(iv) What is scatter diagram?

(v) What is cross sectional data?

(vi) What is factor loading?

(vii) What is the condition to run t test in SPSS?

(viii) What is use of Scree plot in factor analysis?

(ix) What is sampling error?

(x) What is the default value of last parameter of VLOOKUP?

Group – B

(Short Answer Type Questions) 6 x 5 = 30

Answer any *six* from the following

2. Write down the commands to change a continuous data into categorical data in SPSS. 5

3. State the differences between factor analysis and cluster analysis. 5

4. What are the characteristics of normal distribution? 5

5. What is the difference between point estimation and interval estimation? 5

6. What Kind of Data Filters Is Available In Excel? 5

7. Differentiate between relative and absolute cell referencing techniques with the help of sample data. 5

8. State whether each of the following variable is qualitative or quantitative and indicate the measurement scale that is appropriate for each: 5

   i) Age

   ii) Gender

   iii) Class Rank

   iv) Annual sales

   v) Soft drink size

9. Write formulas for the operations (i) – (iv) based on the spreadsheet given below along with the relevant cell address: 5

	A	B	C	D	E	F	G
1	SNO	Name	Science	Maths	Computers	Total	Average
2	1	Swati	70	80	87	--	--
3	2	Shruti	90	98	89	--	--
4	3	Neelu	90	90	98	--	--
5	4	Rosy	60	76	79	--	--
6	5	Shreya	50	45	67	--	--
7	Max				--		
8	Total		--				

   a) To calculate the Total Marks as sum of Science, Maths & Computers for each student and display them in column F. 2

   b) To calculate the average marks for each student and display them in column G. 1

   c) To calculate the highest marks in Computers and display it in cell E7. 1

   d) To calculate the total number of students appearing for the Science test and display it in cell C8. 1

Group – C

(Long Answer Type Questions) 6 x 10 = 60

10. Determine whether each of the following random variables is categorical or numerical. If it is numerical, determine whether the phenomenon of interest is discrete or continuous. 10

   i) Amount of time the personal computer is used per week

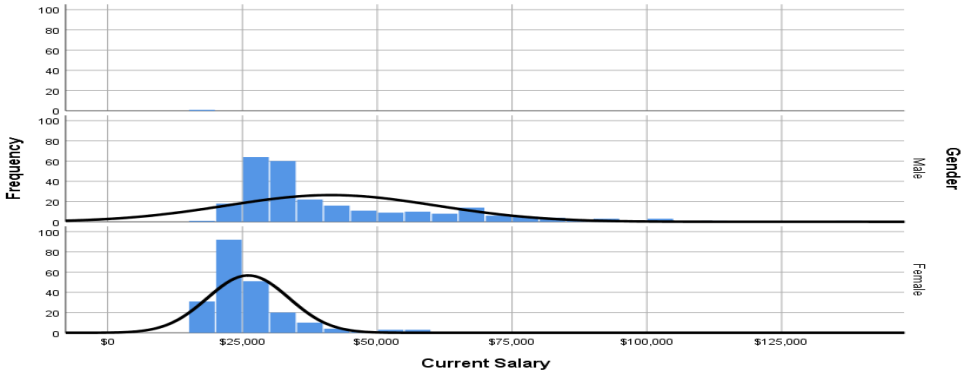
   ii) Number of persons in the household who use the personal computer

   iii) Amount of money spent on clothing in the last month

   iv) Favourite shopping centre

   v) Amount of time spent shopping for clothing in the last month

11. Below graph shows income and gender wise distribution of the 474 respondents of a company. 10



Analyse the graph and interpret the result.

12. The below table shows the gender and employee category wise cross tabulation result and Chi Square test result. Read the tables carefully and answer the following:

Gender * Employment Category Crosstabulation

Count

		Employment Category			
		Clerical	Custodial	Manager	Total
Gender		1	0	0	1
	Male	157	27	74	258
	Female	205	0	10	215
Total		363	27	84	474

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	79.292[a]	4	.000
Likelihood Ratio	95.558	4	.000
N of Valid Cases	474		

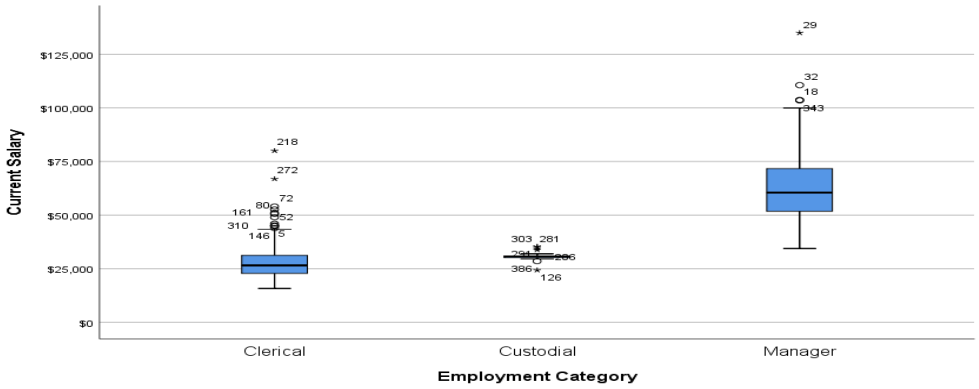
a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .06.

i) Develop a hypothesis. 2

ii) Interpret the Chi Square Test result. 8

13. Give the definition of one variable and two variable data table. 10

14. Below is the result of Box plot measuring two variables employee category and current salary. 10



Analyse the result and identify the outliers.

15. The customer portfolio management division of a large private bank wanted to study the investment behaviour of bank customers in government instruments, mutual funds and securities, bullion and fixed deposits. This analysis was done for every quarter in a year for a period of five years. The survey was done on a different but stock sample of 1000 bank customers for each quarter and the result obtained are shown in the table below: 10

Result of Bank Investment Study (In Percentage)

Instrument	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
Government Instrument	45	43	43	45
MF & Securities	21	17	18	15
Bullion	15	22	21	19
FD	19	18	18	21
Total	100	100	100	100

i) What is the nature of the study? Give Reason.

ii) Interpret the table and draw conclusion for the bank to understand the nature of consumer investment decisions.

16 Give the full syntax of the functions of SUM, SUMIF, SUMIFS, AVERAGEIF, and AVERAGEIFS. 10

17. A company wants to conduct a study among its 474 employees to see whether any salary discrimination exists among the minority and non – minority groups. The result of the study is shown in the figures below: 8+2

Table 1: Group Statistics

Group Statistics

	Minority Classification	N	Mean	Std. Deviation	Std. Error Mean
Current Salary	No	370	$36,023.31	$18,044.096	$938.068
	Yes	104	$28,713.94	$11,421.638	$1,119.984

Table 2: Result of the Independent Sample T Test

Independent Samples Test

		Equality of Variances		t-test for Equality of Means						
									of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Current Salary	Equal variances assumed	28.487	.000	3.915	472	.000	$7,309.369	$1,867.111	$3,640.491	$10,978.246
	Equal variances not assumed			5.003	262.188	.000	$7,309.369	$1,460.936	$4,432.707	$10,186.030

i) Interpret the output table give your suggestion.

ii) Is there any limitations in the study? If yes, give reasons for the same.
