



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – COUNSELLING PSYCHOLOGY

SECOND SEMESTER – APRIL 2022

PCP 2301 – COMPUTER APPLICATIONS AND STATISTICS

Date: 24-06-2022

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A

4 x 5 = 20 Marks

I. Answer any FOUR of the following questions not exceeding 200 words each.

1. Write about the Kruskal – Wallis test. Give an example.
2. Discuss the assumptions in a paired or dependent t-test.
3. Give an example for the function ‘vlookup’ and ‘if’ function in MS Excel.
4. Give an example for ‘count’, ‘countif’ and ‘sumif’ function in MS Excel.
5. Discuss the assumptions in a Chi-square test.

SECTION B

4 x 10 = 40 Marks

II. Answer any FOUR of the following questions not exceeding 500 words each.

6. Write about the types of variables with an example for each.
7. Write about Mann Whitney’s U-test and its assumptions. Give an example.
8. The following figures shows the distribution of digits in numbers chosen at random from a telephone directory

Digits	0	1	2	3	4	5	6	7	8	9
Frequency	1026	1107	997	966	1075	933	1107	972	964	853

Test whether the digits maybe taken to occur equally, frequently in the directory. The value of the chi-square significance at 9 degrees of freedom is 16.919 at 5% level of significance.

9. (i) Define Correlation and classify the range of Karl Pearson’s Correlation Coefficient.
(ii) Find r_{XY} for the following problem

X	4	6	3	2	5	9	7	10	8	6
Y	5	6	4	4	2	8	8	16	10	7

10. Define Mean, Median, Standard Deviation and Quartiles each with an example.

III. Answer any TWO of the following questions not exceeding 1000 words each.

11. Explain Linear regression and its assumptions in detail. Write down the steps to achieve it using SPSS with an example and interpret the output.
12. Explain ANOVA and its assumptions in detail. Write down the steps to achieve it using SPSS with an example and interpret the output.
13. (i) Explain the purpose of Pivot table and some features available.
- (ii) For the below data, write down the steps to get a Pivot table of the following:
- To create a table of Sum of Sales by Products
 - To create a table of Sum of Sales by Year
 - To create a table of Sum of Quantity ordered by Shipping Status
 - To create a table of Sum of Sales by Country
 - To create a table of Sum of Quantity ordered by Deal size.

QUANTITYORDERED	SALES	STATUS	YEAR_ID	PRODUCTS	COUNTRY	DEALSIZE
30	2871	Shipped	2003	Motorcycles	USA	Small
34	2765.9	In Process	2003	Motorcycles	France	Small
41	3884.34	Shipped	2003	Motorcycles	France	Medium
45	3746.7	In Process	2003	Motorcycles	USA	Medium
49	5205.27	Disputed	2003	Motorcycles	USA	Medium
36	3479.76	Shipped	2003	Motorcycles	USA	Medium
29	2497.77	Disputed	2003	Motorcycles	France	Small
48	5512.32	Cancelled	2003	Motorcycles	Norway	Medium
22	2168.54	Cancelled	2003	Motorcycles	USA	Small
41	4708.44	Shipped	2004	Motorcycles	France	Medium

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