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RJM-102

**M. Phil./Ph. D. IN JOURNALISM AND
MASS COMMUNICATION**

[(M. Phil.(JMC)/Ph. D. (JMC)]

Term-End Examination

December, 2021

**RJM-102 : DATA ANALYSIS AND STATISTICAL
APPLICATIONS**

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Section A is compulsory.*

(ii) *Answer any **four** from Section B and
any **two** from Section C.*

(iii) *A simple calculator is allowed.*

Section—A

Answer all questions :

10×2=20

1. Purpose of Cramer's V.

2. Monotonic relationship.
3. $U_{\text{calc}} = 7$, $U_{\text{stat}} = 5.6$. Interpret this finding.
4. Differentiate paired and unpaired t -test.
5. Write 'R' code for unpaired t -test.
6. Analysis of variance.
7. Write hypothesis for F-test with example.
8. Differentiate mean and median.
9. Explain standard deviation.
10. Create a cross tab with example.

Section—B

Answer any **four** questions.

4×10=40

11. With the objectives of finding differences between urban and semi-urban internet users about adoption of online purchase through e-commerce websites, the following data were measured from a sample (See Table I). Treating this data as a ratio one, find significance of difference and interpret your findings with the help of values (attached) table II :

Table I

Sample number	Urban user's monthly purchase	Semi-urban user's monthly purchase
1	7	11
2	9	3
3	3	0
4	6	2
5	8	3
6	12	9
7	16	8
8	3	12
9	7	7
10	9	11
11	11	3

12. Cumulative scores of coursework in a research degree of two different batchers are given ahead (See Table III). Convert the ratio data into ordinal data. Find the significance of

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difference and interpret your findings (refer to attached Table IV) : 10

Table III

Score of Batch A	Score of Batch B
93	85
94	55
56	61
58	56
60	56
59	55
61	59
65	55
55	58
56	55

13. Coverage of three newspapers (International, National, and Regional) on education, health and environment topics was studied for six months. International newspaper published 47 stories on health, 65 on climate and 56 about education news items. National newspaper published 21 on health, 13 on climate and 17 on education. Regional language paper published 23 on health, 8 on climate and 11 on education. With these categorical data, create a cross tab and find out the differences and

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give year interpretation (refer to attached table V). 10

14. For the given dataset, find : (a) range, (b) variance, and (c) standard deviation : 10
241, 41, 51, 16, 50, 22, 22, 7, 40, 17, 23, 4, 16, 11
15. A research study was conducted to find out quality elements on sensational as well as non-sensational news coverage. The following categorical data was recorded (see Table VI). With the help of a statistical test, find the significance of difference from table VII (attached) : 20

Table VI

Quality Element	Sensational	Non-sensational
Instruction	30	25
Process	50	62
Background	73	76
Consequences	69	81
Pros and cons	2	11
Political process	14	49
Attribution	8	12
Multiple Sources	2	7

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Section—C

Answer any *two* questions.

2×20=40

16. Data was collected from a sample of students (who were trying to crack competitive exams), on their time spent for newspaper reading and their exam score on current affairs. (See Table VIII). With the statistical test, find significance of relationship between the two variables (refer attached table IX) and interpret your findings : 20

Table VIII

Time spent on NP reading	Competitive exam score
59	89
59	93
64	86
66	93
51	76
26	29
87	92
46	68
36	59

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17. A study was conducted to check how much time users spent in a week for net browsing (See Table X). Use statistical test to prove the significance of difference, use attached table XI for hypothesis testing : 20

Table X

Metro 1	Metro 2	Metro 3
12	14	8
8	11	4
7	9	11
9	7	4
5	4	7
6	6	3
8	2	7
	3	1
		6

18. A study was conducted to gauge the coverage of geopolitical conflicts in mainstream media and social media. Table XII provides frequency of news coverage in the mainstream and social

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- media. Convert it into an ordinal data and find the relationship between these coverage of two types of mainstream and social media : 20

Topic	Mainstream media	Social media
Strategy	51.7%	47.3%
Security	31.8%	31.3%
Conflict	11.2%	9.3%
Ethical issue	9.4%	10.3%
Economy	8.4%	5.9%
Terrorism	3.7%	11.4%
Technology	0.9%	0.2%

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