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B.A (Semester - V)  
EXAMINATION NOVEMBER 2022  
Psychology  
Statistics of Psychology

[Duration : 2 Hours]

[Mix Marks : 80]

Instructions:

1. All questions are **compulsory**.
2. Figures to the **right** indicate marks.
3. Graph paper will be provided on **request**
4. Use of **simple calculators** is allowed.

Q.1 Write short notes on **any four** of the following:

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- a) Statistics and its role in Psychology
- b) Continuous v/s Discrete variables
- c) Percentiles and percentile ranks
- d) Correlation and types
- e) Uses of Standard Deviation
- f) Uses of the Normal Probability Curve

Q.2 Answer **any four** of the following:

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- a) Tabulate the following 25 scores into a frequency distribution with a class interval of 3 and start the first class interval with the lowest score.

72	81	67	83	61	75	68	82	71	67
77	65	76	63	84	67	86	76	72	69
72	73	70	72	64					

- b) The below given frequency distribution is a special case in the computation of median. Locate the Median and explain.

Scores	Frequency
55-59	5
50-54	3
45-49	8
40-44	18
35-39	15
30-34	10
25-29	7
20-24	2

- c) Compute Z score for the given data:

- i) Mean = 50; SD = 13; Score = 45



ii) Mean = 75; SD = 10; Score = 58

d) Find the Mean, Median and Mode for the following ungrouped data:

9	14	8	13	10	10	11	12	10
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e) Explain the types of Skewness with the help of neat labeled diagrams/figures.

f) Calculate Standard Deviation (SD) for the following set of scores:

52	50	56	68	65	62	75	70
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Q.3

A) Draw a **Pie diagram** to represent the following data given below detailing the monthly expenses of an institution.

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Data	Expenses
Salary of the staff	40,000
Electricity, water & telephone bills	10,000
Office Stationery	20,000
Miscellaneous expenses	30,000

OR

B) Fifty students were asked in class how many hours they studied this weekend. Their responses are given below in a table. Tabulate them into a frequency distribution using a class interval of 3 and construct an **Ogive**.

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11	7	1	8	12	11	7	8	9	10
2	4	7	6	15	4	7	8	6	7
5	10	7	3	11	8	2	9	7	1
13	2	9	7	3	8	7	3	13	9
5	8	7	7	10	4	15	3	12	8

Q.4

A) Compute Mean, Median and Mode for the following frequency distribution:

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Scores	65-69	60-64	55-59	50-54	45-49	40-44	35-39	30-34	25-29	20-24
Frequency	1	3	4	7	9	11	8	4	2	1

OR



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B) Compute Standard Deviation (SD) for the following distribution:

Class interval	Frequency
80-89	2
70-79	5
60-69	7
50-59	9
40-49	10
30-39	7
20-29	6
10-19	3
0-9	1

Q.5

A) Examine in detail the process of hypothesis testing with reference to levels of Significance, One-tail and Two-tailed tests, and errors that may occur.

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OR

B) For a random sample of 10 boys of a class fed with Diet A, the increase in weight during a certain period is as follows:

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10,6, 16, 17, 13, 12, 8, 14, 15, 9.

For another sample of 12 boys of a class fed with Diet B, the increase in weight during the same period is as follows:

7,13,22,15,12,14,18,8,21, 23, 10, 17.

Compute an independent samples t test to determine whether Diet A & B differ significantly as regards in effect on increase in weight given that at 5% level of significance the critical value of t for 20 df is 2.09.

Q.6

A) Compute  $P_5$  &  $P_{45}$  and compute PR of scores 92 & 112.

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Class interval	Frequency
130-139	2
120-129	7
110-119	11
100-109	14
90-99	20
80-89	16
70-79	7
60-69	3

OR

B) Compute Rank Correlation Coefficient for the ratings given by X and Y. Interpret the results.

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Students	A	B	C	D	E	F	G	H	I	J
Rater X	18	14	15	17	12	13	10	9	7	6
Rater Y	15	16	14	13	9	10	8	7	11	6