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(2nd Semester)

PSYCHOLOGY

Paper : PSY–UG–201

(Statistics in Psychology)

Full Marks : 70   Pass Marks : 45%

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 45)

*The figures in the margin indicate full marks
for the questions*

1. *(a)* What is statistics? Explain the importance of statistics in psychological research. 1+8=9

   Or

   (b) What is frequency distribution? Illustrate with examples the guidelines of organizing data in frequency distribution. 1+8=9

2. *(a)* Explain briefly the most common measures of central tendency. Calculate mean and median from the following data : 3+6=9

Score	F
50–54	6
45–49	12
40–44	7
35–39	4
30–34	8
25–29	6
20–24	7
15–19	3
10–14	5
5–9	2

Or

(b) Define standard deviation. Mention the properties of standard deviation. Compute standard deviation for grouped data from the following distribution : 1+2+6=9

Score	F
50–54	7
45–49	10
40–44	4
35–39	3
30–34	2
25–29	12
20–24	18
15–19	10
10–14	8
5–9	6

3. *(a)* Briefly discuss standard score.

Given a distribution of scores
Mean = 60, SD = 5

 (i) What percentage of cases fall below 50?

 (ii) What percentage of cases fall above 70? 3+6=9

Or

(b) Explain the properties of normal curve.

In a normal distribution—
Mean = 40, SD = 10

 (i) What limit will include the highest 10%?

 (ii) What limit will include the lowest 20%? 5+4=9

4. *(a)* Define correlation coefficient. Find the Pearson's coefficient of correlation by using raw score method : 1+8=9

Students	X	Y
A	12	8
B	15	6
C	11	7
D	20	4
E	16	10
F	19	14

Or

(b) Define correlation. Compute the coefficient correlation by product-moment method using deviation score method :   1+8=9

Subjects	X	Y
A	20	15
B	12	11
C	16	20
D	15	18
E	18	17
F	24	4

5. (a) Define pie chart. Calculate and construct a pie diagram from the following ungrouped data :   1+8=9

Students who are taking vocational courses in schools

Vocational Courses	No. of Students
Music	18
Baking	16
Carpentry	36
Photography	20
Tailoring	30

Or

(b) Define a frequency polygon. Construct a frequency polygon from the grouped data : 1+8=9

Class Interval	F
95–99	15
90–94	27
85–89	42
80–84	30
75–79	25
70–74	13
65–69	10
60–64	5

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Date Stamp ....

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To be filled in by the Candidate

BA / BSc / BCom / BBA / BCA 2nd Semester End Term Examination, **2022**

Subject ....

Paper ....

INSTRUCTIONS TO CANDIDATES

1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.

2. This paper should be ANSWERED FIRST and submitted within <u>1 (one) Hour</u> of the commencement of the Examination.

3. While answering the questions of this booklet, any cutting, erasing, over-writing or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.

Roll No. ....

Regn. No. ....

Subject ....

Paper ....

DESCRIPTIVE TYPE

Booklet No. B ....

Signature of Scrutiniser(s)   *Signature of Examiner(s)*   *Signature of Invigilator(s)*

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2 0 2 2

(2nd Semester)

PSYCHOLOGY

Paper : PSY–UG–201

(Statistics in Psychology)

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—I

(*Marks* : 15)

A. Choose the correct answer by putting a Tick (✓) mark in the brackets provided : 1×10=10

1. A variable that can take on only certain values is

   (a) confounding variable   (   )

   (b) constant variable   (   )

   (c) dependent variable   (   )

   (d) discrete variable   (   )

2. Percentile rank can take values only between

    (a) 0 and 100   ( )

    (b) 100 and 1000   ( )

    (c) 0 and 1000   ( )

    (d) 100 and above   ( )

3. Find the mode from the following data :

    2, 9, 2, 3, 6, 7, 8, 2, 0, 1

    (a) 9   ( )

    (b) 2   ( )

    (c) 0   ( )

    (d) 10   ( )

4. Find the range of the following data :

    10, 1, 3, 2, 7, 30

    (a) 7   ( )

    (b) 29   ( )

    (c) 30   ( )

    (d) 10   ( )

5. A frequency distribution that resembles the normal curve is

    (a) mesokurtic   ( )

    (b) platykurtic   ( )

    (c) leptokurtic   ( )

    (d) skewness   ( )

6. The normal distribution was first discovered by

   (a) Laplace   (   )

   (b) Fechner   (   )

   (c) De Moivre   (   )

   (d) Karl Pearson   (   )

7. The value of perfect correlation is

   (a) $\pm \cdot 0$ (   )

   (b) $\pm 1 \cdot 0$ (   )

   (c) $\pm 0 \cdot 0$ (   )

   (d) $\pm 1 \cdot 1$ (   )

8. A relationship that can be best represented by a straight line is

   (a) scatter diagram   (   )

   (b) linear relationship   (   )

   (c) positive relationship   (   )

   (d) negative relationship   (   )

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9. Which of the following graphical representations never has a negative slope?

   (a) Pie diagram ( )

   (b) Histogram ( )

   (c) Frequency polygon ( )

   (d) Cumulative percentage curve ( )

10. Column diagram is also known as

   (a) ogive ( )

   (b) pie diagram ( )

   (c) histogram ( )

   (d) bar diagram ( )

B. Match the following : 1×5=5

Column—I		Column—II	
1.	Absolute zero point	(a)	Absolute measure of dispersion
2.	Standard deviation	(b)	S-shaped
3.	Carl Friedrich	(c)	Ratio scale
4.	Karl Pearson	(d)	Gaussian distribution
5.	Ogive	(e)	Product moment method

SECTION—II

(*Marks* : 10)

C. Answer the following questions in brief : 2×5=10

1. Briefly explain inferential and descriptive statistics.

2. Calculate mean from the following ungrouped data :

20, 14, 16, 15, 3, 12

3. Briefly explain skewness.

4. What is positive and negative correlation?

5. Mention the general rules/procedures of graphical representation.

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