

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(Second Semester)**

Branch – PSYCHOLOGY

PSYCHOLOGICAL STATISTICS - I

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO																			
1	1	Assertion (A) : All facts numerically stated are statistics. Reason (R): Statistics primarily relates to a particular variable than a particular person. i. Both (A) and (R) are true, and R is the right explanation of (A) ii. Both (A) and (R) are true, but (R) is not the right explanation of (A) iii. c) (A) is true, but (R) is false iv. d) (A) is false, but (R) is true	K1	CO1																			
	2	A variable that is systematically manipulated by the investigator is called i. Independent variable ii. Quantitative variable iii. Dependent variable iv. Qualitative variable	K2	CO1																			
2	3	The formula written as Quartile deviation divided by the sum of third and first quartiles is used to calculate i. Coefficient of Inter-Quartiles ii. Coefficient of Quartiles iii. Coefficient of Quartile Deviation iv. Coefficient of Semi-Inter-Quartile Range	K1	CO2																			
	4	Match the following: <table><thead><tr><th colspan="2">Components of a FD table</th><th colspan="2">Descriptions</th></tr></thead><tbody><tr><td>1.</td><td>Class interval</td><td>a.</td><td>Difference between the two limits of a group in a distribution</td></tr><tr><td>2.</td><td>Magnitude of a class interval</td><td>b.</td><td>Boundary between two groups in a distribution</td></tr><tr><td>3.</td><td>Class frequency</td><td>c.</td><td>Average of the two class limits</td></tr><tr><td>4.</td><td>Class Mid-point</td><td>d.</td><td>Number of observations in each class</td></tr></tbody></table> i. a, b, c, d ii. b, a, d, c iii. a, b, d, a iv. b, a, c, d	Components of a FD table		Descriptions		1.	Class interval	a.	Difference between the two limits of a group in a distribution	2.	Magnitude of a class interval	b.	Boundary between two groups in a distribution	3.	Class frequency	c.	Average of the two class limits	4.	Class Mid-point	d.	Number of observations in each class	K2
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3	5	Which of the following does NOT characterize Normal distribution of data? i. A data set which is normally distributed does not model patterns of skewness ii. All the three primary measures of central tendency coincide with each other iii. Half of the values is less than the Mean and the other half is greater than the Mean iv. There is no possibility to determine the proportion of values that fall within certain distances from the Mean	K1	CO3																			
	6	In a perfectly normal distribution, approximately what percentage of scores lie within ± 1 standard deviation from the mean? i. 50% ii 68% ii. 75% iv 95%	K2	CO3																			

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4	7	According to Scattergram, if $r = 0.49$ between Spirituality and Subjective Happiness, it means i. There is a high degree of positive relationship between Spirituality and Subjective Happiness ii. There is a moderate degree of positive relationship between Spirituality and Subjective Happiness iii. There is a low degree of positive relationship between Spirituality and Subjective Happiness iv. There is a zero relationship between Spirituality and Subjective Happiness	K1	CO4
	8	In a study on the influence of Neuroticism and Pet attitude on Internet Addiction, when the linearity among the independent and dependent variables is analyzed, the following values are obtained. $F=77.58$ t values of the dependent variables are 10.2 and 3.4 $R=0.514$ How much would be the total percentage of influence of the IVs of the DV? i. 26% ii. 22% iii. 50% iv. 5%	K2	CO4
5	9	In 2018, an educational institution, in its process of admission to M.Phil programs, considers candidates with low cut-off marks, irrespective of their capability to pursue such challenging programs since the number of applicants for the same (M.phil courses) is lesser, whereas in 2019, the very same institution raised its cut-off marks unreasonably high due to the increased number of applicants, mindless of the fact that many deserving candidates are part of the applicant-group. Which one of the following errors happens during the year 2018 in the given instance? i. Sampling error ii. Non-sampling error iii. Type I error iii. Type II error	K1	CO5
	10	A study reports $p = .03$ ($\alpha = .05$). Which is the correct interpretation? i. The null hypothesis is proven false. ii. There is a 3% probability that the null hypothesis is true. iii. If the null hypothesis were true, the probability of obtaining the observed result (or more extreme) is 3%. iv. There is a 97% chance that the alternative hypothesis is true.	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Name the ethics associated with data manipulation.	K1	CO1
		(OR)		
2	11.b.	List the various types of variables with suitable examples.	K2	CO2
		(OR)		
3	12.a.	Outline the significance of Z scores in Psychological assessment.	K4	CO3
		(OR)		
4	12.b.	Summarize the difference between Standard Deviation and Variance.	K3	CO4
		(OR)		
5	13.a.	Draw and list down the characteristics of a Normal Distribution Curve.	K4	CO5
		(OR)		
4	13.b.	Examine how a data set is tested for normality and its interpretation.	K3	CO4
		(OR)		
5	14.a.	'Correlation is not causation.' Build the concept behind this statement with adequate examples.	K4	CO5
		(OR)		
5	14.b.	Analyse : "Regression is powerful not because it predicts, but because it demands we question how much of the outcome is truly explained — and how much remains uncertainty."	K4	CO5
		(OR)		
5	15.a.	Examine the basic concepts involved in using SPSS.	K4	CO5
		(OR)		
5	15.b.	Analyse the purpose, types and interpretation aspects of t-test.	K4	CO5
		(OR)		

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SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Define Psychological statistics and show its scope with practical examples.	K1	CO1
2	17	“Mean, median, and mode each define the center differently, wisdom lies in choosing the right center for the data.” Illustrate the statement.	K2	CO2
3	18	Explain how 'Normal Distribution' is applied to Behavioural studies with adequate examples.	K4	CO3
4	19	Evaluate Regression based on its pros and cons.	K5	CO4
5	20	Examine in detail the steps of Null Hypthesis Significance Testing.	K4	CO5

Z-Z-Z

END

