

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2025
(Third Semester)

Branch - **PSYCHOLOGY**

PSYCHOLOGICAL STATISTICS - II

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	In systematic sampling, every nth item is selected from: a) A randomly arranged list b) A naturally ordered list c) The first group of participants d) A non-ordered list	K1	CO1
	2	Which sampling method ensures subgroups are represented in proportion? a) Cluster sampling b) Stratified sampling c) Simple random sampling d) Convenience sampling	K2	CO1
2	3	Type I error occurs when: a) A false hypothesis is rejected b) A true null hypothesis is rejected c) A false null hypothesis is accepted d) None of the above	K1	CO2
	4	The primary purpose of ANOVA is to: a) Test differences between two groups b) Test differences between multiple groups c) Predict relationships between variables d) Test a single population mean	K2	CO2
3	5	A positive correlation means: a) Both variables decrease together b) One variable increases, and the other decreases c) Both variables increase together d) The variables are unrelated	K1	CO3
	6	The regression equation predicts: a) A perfect relationship between variables b) The influence of independent variables on the dependent variable c) The likelihood of an event d) Random variation in data	K2	CO3
4	7	The Mann-Whitney U test is used for: a) Comparing means of two independent groups b) Comparing means of two dependent groups c) Comparing means of three or more groups d) Analyzing qualitative data	K1	CO4
	8	Qualitative research primarily focuses on: a) Causal relationships b) Statistical analysis c) Understanding experiences d) Generalizing findings to populations	K2	CO4
5	9	Test-retest reliability measures: a) How well a test measures the construct it claims to measure b) The consistency of test scores over time c) The ability to reproduce the test results d) How test scores vary among test-takers	K1	CO5
	10	Internal consistency is commonly measured by: a) Pearson's r b) Cronbach's alpha c) Spearman's rho d) Chi-square test	K2	CO5

Cont...

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.	Discuss the strengths and limitations of cluster sampling	K2	CO1
		(OR)		
	11.b.	Compare and contrast convenience sampling and random sampling.		
2	12.a.	Explain the concept of Type I and Type II errors in hypothesis testing.	K2	CO2
		(OR)		
	12.b.	Discuss the importance of significance level (alpha) in hypothesis testing.		
3	13.a.	Explain the difference between simple and multiple regression.	K2	CO3
		(OR)		
	13.b.	Describe how a scatter plot can indicate the type of correlation between variables.		
4	14.a.	Describe how a scatter plot can indicate the type of correlation between variables.	K3	CO4
		(OR)		
	14.b.	Explain how qualitative research complements quantitative research.		
5	15.a.	Define and discuss the importance of face validity.	K2	CO5
		(OR)		
	15.b.	Describe the difference between criterion-related validity and construct validity.		

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	What are the key factors to consider when determining sample size in psychological research?	K1	CO1
2	17	How does confidence level influence the outcome of a confidence interval in psychological research?	K3	CO2
3	18	Explain how regression analysis can be applied to predict psychological outcomes.	K2	CO3
4	19	How does the Kruskal-Wallis test differ from the one-way ANOVA?	K3	CO4
5	20	Discuss the importance of reliability and validity in psychological assessments. Explain how a lack of either can impact the interpretation of assessment results in applied psychology settings.	K4	CO5