

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch - APPLIED PSYCHOLOGY

PSYCHOMETRIC METHODS & STATISTICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

| Question No. | Question | K Level | CO |
|--------------|---|---------|-----|
| 1 | What is another term for difference threshold? a. absolute threshold b. difference adaptation c. just noticeable difference d. sensory differentiation | K1 | CO1 |
| 2 | People are more likely to notice a 50 cent increase in the price of a candy bar than they are to notice a 50 cent increase in the price of an iPad. This illustrates what? a. the absolute threshold b. Weber's law c. signal detection d. opponent processes | K2 | |
| 3 | What is a statistic? a. a sample characteristic b. a population characteristic c. unknown d. normally distributed | K1 | CO2 |
| 4 | Find from below option what do observational studies allow? a. population inference b. causal inference c. both types of inference d. neither type of inference | K2 | |
| 5 | What is the scale applied in statistics, which imparts a difference of magnitude and proportions, is considered as? a. Exponential scale b. Goodness scale c. Ratio scale d. Satisfactory scale | K1 | CO3 |
| 6 | Which one of the following variables is not categorical? a. Age of a person. b. Gender of a person: male or female. c. Choice on a test item: true or false. d. Marital status of a person (single, married, divorced, other) | K2 | |
| 7 | Which value appears very frequently in a data? is called: a. Mean b. Median c. Mode d. Central tendency | K1 | CO4 |
| 8 | A chi-square test involves a set of counts called "expected counts" - What are the expected counts? a. Hypothetical counts that would occur if the alternative hypothesis were true. b. Hypothetical counts that would occur if the null hypothesis were true. c. The actual counts that did occur in the observed data. d. The long-run counts that would be expected if the observed counts are representative. | K2 | |
| 9 | Which of the following is not true for the construction of achievement tests? a. Evaluation b. Objectivity c. Validity d. Reliability | K1 | CO5 |
| 10 | Choose from below the main characteristics of standardized tests are that they are free from. a. Interpretive errors b. Personal errors c. Variable errors d. Constant errors | K2 | |

Cont...

SECTION - B (35 Marks)

Answer ALL questions

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

| Question No. | Question | K Level | CO |
|--------------|--|---------|-----|
| 11.a. | Identify the method of average error. | K3 | CO1 |
| | (OR) | | |
| 11.b. | Organize the concept of thresholds. | | |
| 12.a. | Identify the nature of psychological data. | K3 | CO2 |
| | (OR) | | |
| 12.b. | Distinguish in brief the variables. | | |
| 13.a. | Explain measures of variability. | K4 | CO3 |
| | (OR) | | |
| 13.b. | Analyse degrees of freedom. | | |
| 14.a. | Elaborate 1 tailed & 2 tailed tests. | K5 | CO4 |
| | (OR) | | |
| 14.b. | Discuss the nature of ANOVA. | | |
| 15.a. | List methods of validity. | K4 | CO5 |
| | (OR) | | |
| 15.b. | Distinguish - Nominal, ordinal, interval and ratio scales. | | |

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

| Question No. | Question | K Level | CO |
|--------------|--|---------|-----|
| 16 | Distinguish Weber's and Fechner's law. | K4 | CO1 |
| 17 | Appraise the nature of psychological research. | K5 | CO2 |
| 18 | Analyze the importance of testing the normality of the data. | K4 | CO3 |
| 19 | Discuss parametric statistics. | K4 | CO4 |
| 20 | Compile steps in item analysis. | K5 | CO5 |

Z-Z-Z

END