BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – M.Sc.(APSY)-2022/M.Sc.(APSY)-2023
Course Name – Psychometry and Statistics in Applied Psychology
Course Code - APSY202
(Semester II)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) The Latin equivalent of the term 'threshold' is expressed as-

a) Consciousness b) Limen
c) JND d) Terminal

(ii) RL is described as-

a) Real Limen b) Ready Limen
c) Rendered Limen d) Reiz limen

(iii) Choose the age range of the Wechsler adult intelligence scale IV-

a) 14 years to 15 years b) 16 years to 90 years 11 months
c) 10 years to 12 years 7 months d) both 2 and 3

(iv) Indicate full form of JND:

a) Joint noticeable diffrence b) Just noticeable difference
c) Just no difference d) none of these

(v) If a test measures what it supposed to measure is described as

a) Reliability b) Face Validity
c) Test discrimination d) Test difficulty index

(vi) Identify which of this questionnaire is time consuming?

a) Mail questionnaire b) Face to face administered questionnaire
c) Fixed response questionnaire d) Open ended questionnaires

(vii) Identify the disadvantages of interviews-

a) Recording information of the interviewee b) Time consuming
c) Validity on verbal responses d) All of these

(viii) Identify the purpose of a questionnaire -

a) To require factual information's
b) To observe a particular group
c) Meet research objectives
d) All of these

(ix) Select the correct option- Through rating scale, the observer categorizes_____ on a continuum

a) Objects
b) Persons
c) Events
d) All of these

(x) Identify which of following is the qualitative variable?

a) Height
b) Age
c) Eye color
d) Annual salary

(xi) 'Chi square is form of non-parametric tests'. Report the correct option-

a) False
b) True
c) True or false depends on the type of variables
d) Cannot say

(xii) "Homoscedasticity is an assumption for parametric test". Report the correct option-

a) True
b) False
c) True or false depends on the type of variables
d) Cannot say

(xiii) "The contributors to variance in the total sample must be additive", is not an assumption in analysis of covariance. Report the correct option-

a) True
b) False
c) True or false depends on the type of variables
d) Cannot say

(xiv) Analyze the characteristic of norm referenced testing.

a) Comparative Ranking in a group
b) Evaluation of absolute achievement levels
c) Individual performance against a set standard
d) Comparison to a group of test-takers

(xv) Distinguish the purpose of norm referenced testing from criterion-referenced testing.

a) Group comparison
b) Individual performance
c) Meeting specific criteria
d) Absolute achievement

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Explain Interval scale with example (3)
3. Discuss Nominal Scale with example (3)
4. Explain item discrimination index. (3)
5. Explain qualitative data analysis (3)
6. Write the characteristics of multiple correlation. (3)

OR

Write the underlying assumptions in analysis of variance (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain different threats to external validity (5)
8. Organize the different steps of test construction (5)
9. Discuss only the examples of Nominal scale, Ordinal scale, Interval scale (5)
10. Describe the Fechners Law. (5)

11. Solve the following: 30 students (18 from public school and 12 from government schools) participated in a debate. Some of them spoke in favour and some against the topic. The data are tabulated as follows: (5)

	Favour	Against	Total
Public schools	12	6	18
Govt schools	2	10	12
Total	14	16	30

Is the choice of the speakers, for or against the topic independent of their belonging to a public or government school?

12. Given the following data for a group of students: (5)

X_1= Scores on intelligence test

X_2= Scores on memory sub test

X_3= Scores on reasoning sub test

M_1= 78, SD_1= 10.21, r_{12}= 0.67

M_2= 87.20, SD_2= 6.02, r_{13}= 0.75

M_3= 32.80, SD_3= 10.35, r_{23}= 0.63

a. Evaluate a multiple regression equation involving the dependent variable X_1 and two independent variables X_2 and X_3.

b. If a student obtains a score of 80 on memory sub-test and a score of 40 on reasoning sub-test, what can be his expected score in total intelligence test?

OR

Given the following data, evaluate the two regression equations. X= 2,3,6,4,5,4 Y=1,3,4,2,5,3 (5)

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