



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Optometry-2021
Course Name – Research Methodology and Bio-statistics
Course Code - BOPTOS506
(Semester V)

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) Choose the correct alternative from the following: (i) First step of an investigation is __ b) presentation of data. a) collection of data. d) explanation of data. c) analysis of data. (ii) Diagrams are for ____ b) better quantitative picture. a) the use of exports. d) the use of imports. c) better mental appeal (iii) Skewness is positive when mean is b) less than mode. a) greater than mode. c) equal to mode. d) negative. (iv) The regression lines helps to find the b) average of x only. a) average of x and y. d) the median of x and y. c) average of v only. (v) In a positively skewed distribution mean>median is _____ a) lesser than mode b) equal to mode c) greater than mode a seem to be strong placed in panel d) none accept a seemble medical is used to compare the variability of two or more than two series. (vi) 5 Standard deviation. a) mean. c) Coefficient of variation. (230) d) Mean deviation (vii) The spearman rank correlation coefficient is a ______ measure of rank correlation. Alabases latinare b) non-parametric atab to account our adjoint. a) parametric Largenage view at d) non-linear assurations for the passes and request the c) linear (viii) What is the purpose of research design in a study? we have the best and the second of the sec

a) To collect data c) To analyze data	b) To plan and structure the study d) To draw conclusions design?	
(ix) Which of the following is NOT a type of research	b) Descriptive	
a) Experimentalc) Predictive	d) Subjective	
(x) In experimental research, what is the independe	nt variable?	
a) The variable being measured	b) The variable that is manipulated	
c) The outcome variable	d) The control variable	
(xi) What does a longitudinal research design involve	e?	in time
 a) Studying a single group at one point in time c) Studying a single group over an extended period 	 b) Studying multiple groups at one point d) Studying multiple groups over an extern period 	nded
(xii) Which of the following is a disadvantage of a cro	ss-sectional research design?	
a) It is time-consuming	b) It cannot establish cause-and-effect relationships	
c) It is expensive (xiii) What is a research hypothesis?	d) It requires a large sample size	
a) A tentative prediction or explanation that can be tested	b) A proven fact	
c) A subjective opinion (xiv) What is random sampling in research design?	d) A random guess	
a) Selecting participants based on a specific characteristic	b) Selecting participants haphazardly	
c) Selecting participants using a random process	d) Selecting participants from a specific l	ocation
(xv) What is a pilot study in research design?		
a) A study conducted with airplane pilots	 b) A small-scale study conducted before main study 	the
c) A study conducted with young participants	 d) A study conducted in a pilot phase of research 	
Grou		
(Short Answer 1	Type Questions)	3 x 5=15
2. Define Mann-Whitney U test.		(3)
3. Define plagiarism in research and explain is it considered unethical?		(3)
4. Define qualitative research.		(3)
5. Define descriptive research.		(3)
6. Discuss the advantages of cluster sampling in large-scale research studies. OR		(3)
How should a researcher address potential limitation		(3)
Grou	up-C	
(Long Answer T		5 x 6=30
7. Describe the process of data collection in experim	ental research	/c\
8. Discuss the concept of continuous data in research with overally		(5) (5)
 Explain the concept of effect size and its relevance research findings. 	e in determining the practical significance of	of (5)

10. Explain the concept of sampling distribution and it's importantance in inferential statistics. (5)
11. Describe the role of interviews in qualitative data collection. (5)
12. Discuss the significance of the correlation coefficient (r) in correlation analysis and also mention the strength of correlation interpreted based on the value of r.
OR
Describe the Chi-Square test for independence and explain the procedure of conducting the test.
(5)