

Seat No.: _____

SANKALCHAND PATEL UNIVERSITY

Ph.D. COURSE WORK EXAMINATION – SUMMER-2019

Subject Name: Research Methodology and Statistics

Subject Code: 1RI3000101

Date: 11 /05 / 2019

Time: 3 Hrs.

Total Marks: 100

Instructions:

1. Attempt All Questions
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 Select Correct Answer for following MCQs (Any 10) – 02 Marks each 20

1. In 'quid-pro-quo', quo stands for
 - A Monopoly granted for the term of the patent
 - B Exclusive privilege of making, selling and using the invention
 - C Knowledge disclosed to the public
 - D None of the above
2. All of the following are possible goals of an exploratory study except _____.
 - A Discover future research tasks
 - B Provide insight
 - C Expand understanding of a topic
 - D Test hypothesis
3. The coefficient of correlation
 - A Cannot be positive
 - B Cannot be negative
 - C Can either be positive or negative
 - D Always positive
4. Research undertaken for knowledge sake is
 - A Survey
 - B Pure Research
 - C Action Research
 - D Pilot study
5. is a source of Hypothesis
 - A Energy
 - B Survey
 - C Knowledge
 - D Intuition
6. Research related to abstract ideas or concepts is
 - A Qualitative research
 - B Quantitative research
 - C Empirical research
 - D Conceptual Research
7. Facts or information's are analyzed and critical evaluation is made in
 - A Action research
 - B Analytical research
 - C Pilot study
 - D None of Above
8. Analysis of variance is a statistical method of comparing the _____ of several populations.
 - A Variances
 - B Means
 - C Standard deviations
 - D None of the above
9. A negative value for a correlation indicates.....
 - A Decreases in X tend to be accompanied by increases in Y
 - B A much stronger relationship than if the correlation were positive
 - C Decreases in X tend to be accompanied by decreases in Y
 - D A much weaker relationship than if the correlation were positive

10. Research design strategy encompasses all of the components below except ____
 - A Sampling design
 - B Data analysis
 - C Data collection design
 - D Instrument development
11. What does a trademark protect?
 - A A work of art
 - B Logos, names and brands
 - C An invention
 - D A secret formula and the look, shape and feel of a product
12. In the main purpose is to formulate a problem for more precise investigation.
 - A Descriptive study
 - B Exploratory or Formulative study
 - C Diagnostic study
 - D None of the above
13. In Research Report is used to acknowledge indebtedness
 - A Bibliography
 - B Index
 - C Appendix
 - D Foot-Notes
14. In general the distribution of F-ratios is...
 - A Positively skewed with all values greater than or equal to zero
 - B Negatively skewed with all values greater than or equal to zero
 - C Symmetrical with a mean of zero
 - D Symmetrical with a mean equal to df between
15. In testing a Hypothesis the common error is
 - A Type I
 - B Type I and II
 - C Type II
 - D None of these
16. A short summary of Technical Report is called
 - A Publication
 - B Research Abstract
 - C Article
 - D None of Above
17. Which of the following may have an adverse effect on a correlation coefficient?
 - A A negative relationship between your X and Y variables
 - B Too many people in your experiment
 - C Restricting the range of possible scores
 - D The scores on one variable have larger numbers than the other variable
18. "A systematic step-by-step Procedure following logical process of reasoning" called
 - A Observation
 - B Deduction
 - C Experiment
 - D Scientific method
19. A Hypothesis from which no generalization can be made is
 - A Descriptive Hypothesis
 - B Null Hypothesis
 - C Analytical Hypothesis
 - D Barren Hypothesis
20. Rank Correlation was found by
 - A Galton
 - B Fisher
 - C Spearman
 - D Pearson

- Q.2 Answer the following questions (Any Two) 20**
- (A) Describe the format of a research report. What does its main body comprise of? Briefly discuss the different parts of a thesis along with its significance.
 - (B) Define Intellectual Property Rights. What is patent infringement? Discuss the different types of patent infringement.
 - (C) Discuss the criteria for selecting a research topic and designing a research study. Write a short note on research design.
 - (D) Describe hypothesis testing procedure with example. Write a note on Chi-square test
- Q.3 Answer the following questions (Any Two) 20**
- (A) Write a note on copy ~~write~~ ^{right} and trademark protection.
 - (B) Briefly explain:
 - (i) Tukey's test, (ii) Dennett's test, (iii) Newman-Keuls test
 - (iv) Wilcoxon test (v) Kruskal-wallis test
 - (C) 'Literature survey is critical for the success of any research project'- Justify this sentence. Define literature review and briefly discuss objectives & various sources of literature review.
 - (D) Describe various mode of industry institute interaction. Explain importance of industrial project.
- Q.4 Answer the following questions (Any Two) 20**
- (A) Discuss problems encountered by researchers in India. Explain quality indices of research publications.
 - (B) Discuss techniques of documentation. Describe applications of computer in research documentation.
 - (C) Describe the ANOVA for data analysis in research. Explain importance of data analysis in research
 - (D) What is error? Write a note on limitation and sources of error in research
- Q.5 Answer the following questions 20**
- (A) What is Research? What are the objectives behind it? Discuss in detail about different types of research with suitable examples and its significance
 - (B) Briefly explain cost analysis of the research project. Write a note on sources for procurement research grants from different government and private agencies.
