

SANKALCHAND PATEL UNIVERSITY**Ph.D. COURSE WORK EXAMINATION – JANUARY 2023****Subject Name: Research Methodology and Statistics****Date: 30/01/2023****Subject Code: 1RI3000101****Time: 3 Hrs.****Total Marks: 80****Instructions:**

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

- Q.1 Answer the following questions. (MCQs - 02 Marks each) (Any Eight) 16
- 1 Which of the following test use rank sums?
A F test B Chi-square and Sign tests
C Runs test D Kruskal-Wallis and Wilcoxon test
 - 2 A Trade Mark can be removed from the Register for non-use within how many years of Registration?
A 3 years B 5 years
C 7 years D 10 years
 - 3 Deductive Reasoning is applied in:
A Action research B Applied research
C Quantitative research D Qualitative research
 - 4 The rights of a patentee are
A Sell or distribute B Assign the property to others
C License D All of the above
 - 5 Analysis of variance is a statistical method of comparing the _____ of several populations.
A means B variances
C standard deviations D none of the above
 - 6 If the assumed hypothesis is tested for rejection considering it to be true is called?
A Composite Hypothesis B Null Hypothesis
C Simple Hypothesis D Statistical Hypothesis
 - 7 Which of the following techniques is an analysis of the relationship between two variables to help provide the prediction mechanism?
A Correlation B Standard error
C Regression D None of the above
 - 8 In order to pursue the research, which of the following is priorly required?
A Deciding about the data analysis procedure B Developing a research design
C Formulating a research question D Formulating a research hypothesis
 - 9 The format of thesis writing is the same as in
A Presenting a workshop/conference paper B Preparation of research paper/article
C A research dissertation D Writing of Seminar representation
 - 10 What do you mean by synopsis of a research project?
A A plan of the research B Extracts from the research observations
C Summary of the findings of the research D The blue print of research

- 11 Two types of reference noting systems used in Citation styles are –
- A Reference note and bibliographical note B Footnote and Endnote
- C Indent note and last note D Under note and back note
- 12 ‘International Standard Book Number (ISBN)’ is a _____ digit unique numeric commercial machine-readable identification number meant for monograph publications.
- A Eight B Ten
- C Thirteen D Fifteen
- 13 Essential in ethics and ethical standards is
- A A good understanding of business. B The capacity to produce good research.
- C The capacity to distinguish between right and wrong D A good grasp of research methods.
- 14 Which among the following is not a kind of plagiarism?
- A Patch Writing B Untainted Plagiarism
- C Indirect Plagiarism D None of Above
- 15 In a Wilcoxon rank-sum test
- A Ties never affect the decision B Ties always affect the decision
- C Ties within one sample may affect the decision D Ties between the two samples may affect the decision
- Q.2 Answer the following questions. (Any Two) 16
- A Write a note on hypothesis testing.
- B Describe the ANOVA for data analysis in research.
- C Discuss Wilcoxon test, Kruskal-wallis test, Friedman test.
- D Discuss Cost analysis of the research project.
- Q.3 Answer the following questions. (Any Two) 16
- A What is documentation? Why it is needed in research ? Give brief account of techniques used in documentation.
- B Write a short note on research design.
- C What is Plagiarism? Discuss its types and briefly discuss how it can be prevented in research.
- D What is a feasibility report? How will you prepare a feasibility report for an industrial project?
- Q.4 Answer the following questions. (Any Two) 16
- A Write a note on copyrights and trademark protection.
- B Write a note on Research Ethics.
- C Write a note on Sources for procurement research grants.
- D Discuss Tukey’s test, Dunnett’s test, Newman-Keuls test.
- Q.5 Answer the following questions. (Any Two) 16
- A Define the term “research”. Discuss types of research in brief.
- B What is patent infringement? Discuss the different types of patent infringement.
- C Write a note on Research paper-article writing.
- D Write a note on (i) Z-test (ii) F-test.
