
Section 1 - Module 7

1) Which of the following are the dependent variables in the study "Effect of Managerial Skills Training Programme on the creativity and problem solving skills of students of Masters in Business Administration"?

- A) Managerial Skill Training Programme
- B) Problem solving skills
- C) Creativity
- D) Both problem solving skills and Creativity

2) You are testing the hypothesis that there exist significant relationship between the attitude towards practical work and performance in practical work. Which of the following r significant at the indicated level will lead to rejection of the hypothesis?

- A) $r = .43$ $p = .01$
- B) $r = .36$ $p = .05$
- C) $r = .23$ $p = .10$
- D) $r = .39$ $p = .02$

3) A teacher is interested in comparing the effectiveness of three different instructional strategies in teaching his course. He is taking three different intact classes and teach them using different instructional strategies. The study is an example of:

- A) True experimental design
- B) Quasi experimental design
- C) Pseudo experimental design
- D) Case study design

4) Which one of the following is NOT an idea generating technique?

- A) Attribute Listing
- B) Evaluation matrix
- C) Brain writing
- D) Brainstorming

5) Which of the following is NOT a characteristic of standardized tests?

- A) Norms
- B) No standard set of instructions
- C) Reliability
- D) Validity

6) If you are interested in identifying the reasons for selection of graduates in your branch of your college by the MNCs, you will prefer to select a sample of employers through:

- A) Snowball sampling
- B) Purposive sampling
- C) Simple random sampling
- D) Volunteer sampling

7) The key elements included in the funding proposal include:

- A) Rationale for the study
- B) Financial resources required
- C) Methods & Procedure
- D) All of the above

8) Which of the following is an example of Incremental Innovation?

- A) i-Pad
- B) Cloud computing
- C) Computers
- D) None of the above

9) In case, you want to have extra class after institution hours, for experimentation of new technique of meditation on students, you should prefer:

- A) Quota sampling
- B) Simple random sampling
- C) Snow ball sampling
- D) Volunteer sampling

10) Which of the following sources of information will a researcher refer to locate the relevant articles?

- A) Annotated bibliography
- B) Books
- C) Encyclopedia
- D) Dissertation

11) Which of the following is NOT a research question related to the study on "Content analysis of last five years question papers of Electrical Engineering of Rajasthan Technical University"

- A) What is the extent of coverage of syllabus?
 - B) What is the difference in the achievement scores of boys and girls?
 - C) What are the various levels of capabilities assessed?
 - D) Is the allocation of marks appropriate?
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12) "Effect of Parental Occupation and Educational qualification of Trained and Untrained Teachers on their Teaching effectiveness of" is an example of:

- A) Correlation research
 - B) Experimental research
 - C) Ex-post Facto research
 - D) Survey research
-

13) If the population consists of three different age groups i.e below 25 years, 25-45 years and 45-65 years and the number is 400, 300 and 500 respectively. You intend to select a sample of 600 using proportionate random sampling technique. The number selected in each category will be:

- A) 200, 200, 200
 - B) 200, 150, 250
 - C) 150, 200, 250
 - D) 250, 200, 150
-

14) Interviews can be:

- A) Structured
 - B) Semi-structured
 - C) Unstructured
 - D) All of the above
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15) Which one of the following makes ex-post facto research different from experimental research?

- A) Scales of measurement used for measuring variables.
 - B) Size of sample selected for comparison.
 - C) Type of relations established.
 - D) Types of statistical
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16) Which of the following is NOT a part of a Research proposal?

- A) Research Problem
 - B) Resources required
 - C) Analysis of Data & Interpretation of Results
 - D) Research Outcomes
-

17) If you want to compare the creativity of your first, second and third year students and you have obtained scores on an interval scale, which of the following technique of analysis would you use?

- A) Analysis of covariance
 - B) Analysis of variance
 - C) Pearson Product Moment Correlation
 - D) Multiple regression
-

18) The process to arrive at questions/ items for a questionnaire involves writing:

- A) Purpose of the study
 - B) Research questions
 - C) Criterion questions
 - D) All of the above
-

19) Which of the following is an example of directional hypothesis?

- A) There is significant effect of blended learning on the achievement in Manufacturing Processes
 - B) There is no significant effect of blended learning on the achievement in Manufacturing Processes
 - C) Students taught through blended learning scored significantly higher in manufacturing course than the students taught through lecture method.
 - D) There is no significant difference in the achievement in Manufacturing Processes of students taught through lecture method and students taught through blended learning
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20) Which of the following points does 'NOT' need to be considered while developing a plan for evaluating a research report?

- A) Select the evaluation methods to be used
 - B) State the purpose and scope of the evaluation
 - C) Identify the possible outcome of the evaluation
 - D) Establish the operational steps to be followed
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21) A teacher is not satisfied with student involvement in her class. She wants to implement new strategy to enhance student involvement and on the basis of results would like to bring changes in her strategy. She is involved in:

- A) Basic research
 - B) Evaluation research
 - C) Applied research
 - D) Action research
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22) If a researcher wants to collect information regarding the number of courses offered, number of teachers in each discipline, and enrolment in various courses and number of students who pass out from various course, he should prefer the tool:

- A) Interview schedule
 - B) Observation schedule
 - C) Questionnaire
 - D) Interview and observation schedule
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23) While evaluating the appropriateness of measuring instruments, which of the following are the parameters of evaluation?

- A) Valid
 - B) Reliable
 - C) Both (A) & (B)
 - D) Neither (A) Nor (B)
-

24) If you have 10,000 students of ECE branch in various technical institutions of your state and you want to select 20% of the sample by including every n^{th} unit, the sampling technique used is:

- A) Quota sampling
 - B) Stratified random sampling
 - C) Systematic sampling
 - D) Purposive sampling
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25) The minimum sample size for a correlation study is:

- A) 10
- B) 20
- C) 30
- D) 40

26) In case, the scores obtained by ten students on leadership scale are:

25, 27, 29, 30, 34, 36, 40, 43, 46, 108

Which of the following measures is not appropriate?

- A) Mean
 - B) Median
 - C) Mode
 - D) Range
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27) The steps in scientific method include:

- A) Formulation of hypotheses
 - B) Testing of hypotheses
 - C) Verification of hypothesis
 - D) All of the above
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28) The major difference between research objectives and research questions is:

- A) Research objectives are derived from purpose and research questions are derived from research objectives
 - B) Research objectives are stated in question form and research questions are stated in statement form
 - C) Research objectives are stated in statement form and research questions are stated in question form
 - D) Research objectives are what you intend to study and research questions are tentative solution to the problem
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29) If you intend to study the commonalities among the institutions with first rank in NIRF during the last five years, you will prefer:

- A) Volunteer sampling
 - B) Snowball sampling
 - C) Purposive sampling
 - D) Simple random sampling
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30) If you are testing hypothesis that there are no significant differences in the numerical aptitude of male and female students, you will use:

- A) One-tailed test
- B) Two tailed test
- C) Both (a) and (b)
- D) Neither (a) nor (b)

31) In a study on 'Predicting effectiveness as team member on the basis of communication and interpersonal skills of students', which is the predictor variable?

- A) Communication skills
 - B) Interpersonal skills
 - C) Both (A) & (B)
 - D) Neither(A) Nor (B)
-

32) Which of the following is NOT a principle of designing a questionnaire?

- A) Avoid double negatives
 - B) Avoid using multiple items to measure a single construct
 - C) Avoid double barreled questions
 - D) Avoid leading questions
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33) The correct sequence of steps to be followed in carrying out review of related literature is:

- A) Identify the sources of information, Abstracting the information, Identifying the key words, Analyzing and reporting the literature
 - B) Identify sources of information; Identify key words; Abstracting the information; Analyzing and reporting the literature
 - C) Identify key words; Identify sources of information; Abstracting the information; Analyzing and reporting the literature
 - D) Identify sources of information; Identify key words; Analyzing and reporting the literature; Abstracting the information;
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34) Which of the following is NOT a characteristic of the Ex-post facto research?

- A) Data is collected after the presumed cause has occurred
 - B) May result in many plausible causes
 - C) Involves manipulation of independent variable
 - D) Random assignment to groups is not possible
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35) Which of the following variables the researcher will NOT be able to manipulate?

- A) Feedback
 - B) Instructional methods
 - C) Instructional media
 - D) Socio economic status of the family
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36) The key words in the study 'Problems faced by teachers and Students of higher education during online teaching learning in Punjab' are:

- A) Online Teaching learning, Higher education, Students,
 - B) Problems, Online Teaching learning, Higher education, Students, Teachers
 - C) Problems, Online Teaching learning, Higher education, Teachers
 - D) Online Teaching, Higher education, Students, Teachers
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37) The Preliminary Section of Research Report includes:

- A) Acknowledgements
 - B) List of Tables & Figures
 - C) Table of Contents
 - D) All of the above
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38) Which of the following are the characteristics of Action research?

- A) It is context specific
 - B) It is participatory
 - C) It involves an element of self evaluation
 - D) All of the above
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39) If you are working in a boys college and you want to select 30% of the students from fourth year Industrial Engineering course, you will use the technique of:

- A) Simple random sampling
 - B) Stratified random sampling
 - C) Cluster sampling
 - D) Purposive sampling
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40) Which of the following studies would use the design of longitudinal studies?

- A) Follow-up study of graduates from IITs.
 - B) Change in Knowledge and skill set of students of Civil Engineering during four years of study in BITS, Pillani
 - C) Both (A) &(B)
 - D) Neither (A) Nor (B)
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41) Journey maps are prepared in Design Thinking Process to:

- A) Create a roadmap of activities
 - B) Create a new design
 - C) Gain insights into the customers' needs and experience
 - D) Generate a new strategy
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42) Which one of the following is 'NOT' a characteristic of creative product?

- A) Fits the needs of the situation
 - B) Aesthetically pleasing
 - C) Non-adaptive to reality
 - D) Solves a problem
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43) If you are not able to manipulate the independent variable, you will prefer

- A) Ex-post facto research
 - B) True experimental research design
 - C) Quasi experimental research design
 - D) Pseudo research design
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44) Which of the following factors affect the external validity of an experimental research?

- A) History
 - B) Maturation
 - C) Interaction of Testing & Treatment
 - D) Testing
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45) Finding solutions to the real life problems is the purpose of:

- A) Applied research
- B) Action Research
- C) Basic research
- D) Evaluation research

46) In case, the study involves prediction of social interaction on the basis of communication effectiveness, confidence, and level of education, which statistical technique will you prefer.

- A) Chi-square
 - B) Multiple regression
 - C) Pearson product moment correlation
 - D) Rank order correlation
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47) Which one of the following is a relevant research question for a study on Acceptability of Graduates in Computer Science by the IT Industry?

- A) In which type of industry-large or medium scale the acceptability of graduates is more?
 - B) What are the reasons for low acceptability of graduates by the MNCs?
 - C) Both (A) & (B)
 - D) Neither (A) Nor (B)
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48) Which one of the following is the first generation model of innovation?

- A) Market pull model
 - B) Network innovation model
 - C) Open innovation model
 - D) Technology push model
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49) If you are interested in finding out how your alumni progress in their career during ten years after graduation, you will prefer

- A) Survey study
 - B) Longitudinal study
 - C) Case study
 - D) Content analysis study
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50) If you are interested in finding out how and why College of Engineering, Pune could excel in technical education, you will prefer a:

- A) Case study research
- B) Content analysis research
- C) Survey research
- D) Experimental study

51) As a teacher, you are observing that when you give problems for assignments, students copy material from one book and submit. Which of the following is the primary reason?

- A) Problem have multiple right answers
 - B) Problems assigned are simple and has only one right answer
 - C) Problems can be examined from multi-perspective
 - D) Problems requires out-of-the box thinking
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52) In case, you want to rate the institutions in terms of facilities that exist in those institutions, you will prefer:

- A) Interviews
 - B) Observation schedule
 - C) Questionnaire
 - D) Questionnaire and an observation schedule
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53) Action research will be preferred when:

- A) A teacher wants to improve student participation in group tasks & activities in his class
 - B) An administrator wants to improve the motivation of his staff
 - C) A trainer wants to improve his training methods to achieve training objectives
 - D) All of the above
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54) 'Suggestions for further research' is a part of:

- A) Analysis of Data
 - B) Introduction
 - C) References
 - D) Summary & Conclusions
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55) Which of the following may NOT be a consideration for delimiting the review of related literature?

- A) Findings
- B) The period for which review is conducted
- C) Specifying the context
- D) Specifying the design of the study

56) Observing and interpreting the non-verbal behaviour of respondents will be a skill needed in case of a use of:

- A) Questionnaire
 - B) Observation
 - C) Interviews
 - D) Both observation & interview
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57) If you are interested in determining the reactions of teachers and students of engineering colleges towards choice based credit system, you will undertake:

- A) Correlation research
 - B) Survey research
 - C) Ex-post facto research
 - D) Experimental research
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58) As a head of an institution, you find that in second year there were apparent differences in the achievement scores of students who joined engineering programme after twelfth and who joined through lateral entry. Which of the following methods of research will you use?

- A) Case study
 - B) Correlational research
 - C) Ex-post Facto research
 - D) Experimental research
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59) The research question 'How does pre-service training in pedagogy affect the teaching effectiveness of teachers in higher education' can be answered by undertaking:

- A) Case study research
 - B) Survey research
 - C) Experimental research
 - D) Ex-post Facto research
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60) Which of the following is an example of research based on method?

- A) Applied research
- B) Action research
- C) Basic research
- D) Descriptive research

61) Which one of the following is 'NOT' an example of blocks to creativity?

- A) Certainty
 - B) Conformity
 - C) Fear of Failure
 - D) Starved Sensibility
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62) Speculations about the relationship between two or more variables are called:

- A) Theory
 - B) Hypothesis
 - C) Principle
 - D) Construct
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63) Action research is depicted as a spiraling process because:

- A) Action researcher continues to study other topics of interest after the initial study is complete
 - B) Process continues after the data are collected and analyzed, and actions are taken based on the findings of the study
 - C) Data collection continues during data analysis
 - D) Results are used by other researchers to further investigate the topic
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64) Which of the following studies is an example of experimental research?

- A) Technological and Pedagogical Competence of Teachers of Technical Institutions to Offer Online Courses.
 - B) Effect of Training in Technology Tools & Techniques on the Technology Competence of Teachers to Offer Online Courses.
 - C) Technological and Pedagogical Competence of Faculty of Harvard University.
 - D) Comparative Study of Technological and Pedagogical Competence of Teachers working in School and Higher Education.
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65) Which of the following is NOT an aspect of evaluation of any journal article?

- A) Summary
- B) Introduction
- C) Review of related literature
- D) Design

66) Observation schedules are useful for gathering information regarding:

- A) Attitude of people
 - B) Adequacy of physical resources
 - C) Ongoing processes
 - D) Reactions of people towards a phenomenon
-

67) If you are interested in studying the effect of structured industrial training on the practical skills and attitude towards practical work of third year students of industrial electronics, you will undertake:

- A) Case study
 - B) Content analysis research
 - C) Experimental research
 - D) Survey study
-

68) Need to resolve conflicts and solve problems occurs at:

- A) Forming stage
 - B) Storming stage
 - C) Norming stage
 - D) Performing stage
-

69) " Write three to four problems you encountered during planning and implementation of structured industrial training of your students" is an example of:

- A) Multiple choice type item
 - B) Multiple response type item
 - C) Matching type item
 - D) Open ended question
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70) If you have data on nominal scale for two variables, you will determine the correlation between the two variables by applying:

- A) Rank order correlation
- B) Pearson Product Moment correlation
- C) Chi- square
- D) Point bi-serial correlation

71) For which of the following hypotheses, you will use one tailed t-test?

- A) There are significant differences in the communication skills of students from rural and urban areas.
 - B) There exist significant differences in the mean achievement scores of male and female students in the course on Digital Electronics.
 - C) Mean achievement score of female students in Applied Mechanics is significantly higher than the mean achievement score of male students
 - D) There are no significant differences in the mean achievement score of male and female students in the course on Soil Mechanics
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72) While evaluating the quality of interaction in a class, the different elements to be observed can be:

- A) Number of questions posed by teacher
 - B) Number of questions posed by students
 - C) Number of clarifications sought
 - D) All of the above
-

73) Inductive reasoning refers to:

- A) Arriving at examples from a generalized rule
 - B) Deducing a generalized rule from examples
 - C) Applying a generalized rule
 - D) Making observations
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74) One of the differences between a research proposal for funding and thesis is:

- A) Methodology for undertaking the study
 - B) CV of the researcher
 - C) Review of related Literature
 - D) Research questions
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75) Predicting success in the course on the basis of scores obtained in the entrance examination is an example of:

- A) Survey research
- B) Correlation research
- C) Ex-post facto research
- D) Experimental research

76) Experimentation stage involves:

- A) Generation of ideas
 - B) Development of a proto type
 - C) Evaluation of ideas
 - D) Mass scale production
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77) If your sample consists of 25% teachers, 20% Doctors, 30% Engineers, 10% Lawyers, and 15% Government Employees, the graphical representation you will prefer will be:

- A) Line graph
 - B) Column graph
 - C) Histogram
 - D) Pie chart
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78) Ability to work in teams can be developed among students by teachers through

- A) Project work
 - B) Problem based learning
 - C) Community surveys
 - D) All of the above
-

79) If you are interested in finding out the dispersion of scores around mean, you will calculate:

- A) Standard deviation
 - B) Variance
 - C) Quartile deviation
 - D) Range
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80) If you arrange students of your class on communication effectiveness from 1 to 15 by assigning 1 to most effective and 15 to least effective student. The data available to you is on:

- A) Nominal scale
- B) Ordinal scale
- C) Interval scale
- D) Ratio scale

81) If you are interested in determining the quality of feedback by teachers on assignments, you will prefer:

- A) Survey research
 - B) Case study research
 - C) Experimental research
 - D) Content analysis research
-

82) If the correlation between achievement scores in twelfth class and entrance examination for engineering is positive, it means:

- A) Higher the achievement scores in twelfth, higher will be the scores in entrance examination for engineering
 - B) Lower the scores in twelfth class, higher will be the scores in entrance examination for engineering
 - C) Higher the achievement scores in twelfth class, lower will be the scores in entrance examination for engineering
 - D) With an increase in the scores in class twelfth, there will be no change in the scores in the entrance examination for engineering
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83) Additive Manufacturing is an example of which type of an innovation:

- A) Process
 - B) Product
 - C) Paradigm shift
 - D) Positioning
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84) Which one of the following is NOT the aspect of evaluation of Review of Related literature?

- A) Statistical techniques to be used
 - B) Literature
 - C) Gaps in research
 - D) Conclusions
-

85) Which of the following measurement scales has an absolute zero?

- A) Ratio scale
- B) Ordinal scale
- C) Nominal scale
- D) Interval scale

86) Researchability is one of the parameters of evaluation in case of:

- A) Sample
 - B) Statistical techniques
 - C) Analysis of data
 - D) Statement of research problem
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87) Which one of the following is the right way of writing reference of a journal article as per APA style?

- A) Malhotra, M.M. (2016). Formative evaluation in engineering education. *The International Journal of Higher Education*, 43:2, 204-212
 - B) *Malhotra, M.M. (2016). Formative evaluation in engineering education. The International Journal of Higher Education, 43:2, 204-2012*
 - C) Malhotra, M.M. (2016). Formative evaluation in engineering education. *The International Journal of Higher Education*, 43:2, 204-212
 - D) Malhotra, M.M. *Formative evaluation in engineering education. The International Journal of Higher Education (2016), 43:2, 204-212.*
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88) Which of the following principles prepares the team to foresee the problems/hindrances in accomplishing the task and prepare itself for the same?

- A) Clarity of purpose
 - B) Coordination
 - C) Visualization
 - D) Walk the talk
-

89) Which of the following research objectives does NOT relate to the study on Utilization of physical resources by the technical institutions in J&K?

- A) To assess the utilization of available classrooms per week
- B) To determine the utilization of laboratories per week.
- C) To assess the utilization of computer facilities created in the institutes
- D) To study the teaching effectiveness in the technical institutions of J&K

90) Any variable on which the measure is taken in order to determine whether the experimental condition has an effect is referred to:

- A) Dependent variable
 - B) Extraneous variable
 - C) Independent variable
 - D) Control variable
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91) The item: Please tick mark the reasons for low motivation of teachers:

- ☐ Poor salary
- ☐ Inadequate facilities in the institution
- ☐ Inadequate physical resources in institution
- ☐ Lack of autonomy
- ☐ Lack of opportunities for growth & development“

is an example of:

- A) Forced choice type item
 - B) Multiple choice type item
 - C) Multiple response type item
 - D) True-False type item
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92) Which of the following is not a descriptive study?

- A) Effect of feedback and reinforcement on the achievement motivation of learners of Electronics & Communication Engineering
 - B) Profile of teachers working in IITs in India.
 - C) Strategies adopted by award winning industries to capture markets.
 - D) Mechanical aptitude of students of mechanical engineering in the state of Himachal Pradesh.
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93) There are no significant differences in the attitude towards use of IOT in Healthcare of Doctors with varied Years of Experience, is an example of:

- A) Research question
- B) Null hypothesis
- C) Directional hypothesis
- D) Non-directional hypothesis

94) Which of the following is NOT a characteristic of case study?

- A) It is an in-depth investigation of a phenomena
 - B) Includes representative sample from the population
 - C) Involves study of multiple variables
 - D) Collects data from multiple sources
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95) Your institution offers degree in Civil Engineering, Electrical Engineering, Mechanical Engineering and Computer Science & Engineering. If you are assigning a major project related to Designing a Smart City, you will prefer a team of students from:

- A) Civil and Mechanical Engineering
 - B) Civil and Electrical Engineering
 - C) Civil, Electrical and Mechanical Engineering
 - D) Civil Engineering, Computer Science & Engineering; Electrical Engineering and Mechanical Engineering,
-

96) While writing a research report, you will consider:

- A) Audience of the report
 - B) Purpose of the report
 - C) Research questions
 - D) All of the above
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97) While evaluating Analysis of Data and Interpretation of Results in a research report, which of the following should be one of the criteria?

- A) Accuracy of gaps identified
 - B) Accuracy of interpretation of results
 - C) Accuracy of definition of terms
 - D) Accuracy of sampling technique
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98) Correlation between job stress and job satisfaction is found to be negative. It means:

- A) Higher the job stress, higher will be the job satisfaction
- B) Lower the job stress, higher will be the job satisfaction
- C) Lower the job stress, lower will be the job satisfaction
- D) Higher the job satisfaction, higher the job stress

99) If the mean achievement score of your class is 65 and SD is 10. As per the normal distribution, how many cases would lie between the scores of 55 and 75?

- A) 68.26 %
 - B) 34.13%
 - C) 95.44%
 - D) 99.72%
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100) Which of the following are the characteristics of a creative person?

- A) Fluency
- B) Sensitivity
- C) Re-definition skills
- D) All of the above