

Ph.D. Entrance Exam – 2024, NITTTR Chandigarh



**NATIONAL INSTITUTE OF TECHNICAL TEACHERS  
TRAINING AND RESEARCH**  
(DEEMED TO BE UNIVERSITY UNDER DISTINCT CATEGORY)  
**CHANDIGARH**

**Ph.D. Entrance Examination 2024**

Subject / Branch / Department :	<b>BASICS OF RESEARCH METHODOLOGY</b> (Common for all candidates)
Roll No. :	/
Candidate Name :	/
Date of Examination :	/

**Maximum Marks: 25 (There is no negative marking)**

- Notes:** (a) Only one option to be tick-marked out of the four options given as answer  
(b) The Candidate must put his/her signature with date at the bottom of each page

1.	Research and Development become the index of development of the country. Which of the following reasons are true with regards to this statement?			
	(a)	R&D can enhance people's standard of living in the country	(b)	R&D reflects the actual economic and social conditions being prevailed in the country
	(c)	R&D targets human development	(d)	All the above
2.	What is the name of the conceptual framework in which the research is carried out?			
	(a)	Research paradigm	(b)	Research design
	(c)	Synopsis of Research	(d)	Research hypothesis
3.	The qualitative research strategy places a value on:			
	(a)	Conducting research that is of a very high quality	(b)	Using numbers, measurements and statistical techniques
	(c)	Design sampling with probability sample techniques	(d)	Generating theories through inductive research about social meanings

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4.	Source of Data collected and compiled by others is called:		
	(a)	Primary	<input checked="" type="radio"/> (b) Secondary
	(c)	Primary and Secondary	(d) None of the above
5.	The concrete observable events which represent the abstract concepts or constructs are called:		
	(a)	Proposition	(b) Data
	<input checked="" type="radio"/> (c)	Variable	(d) Sample
6.	What is the use of Factorial Analysis?		
	(a)	For setting the hypotheses	<input checked="" type="radio"/> (b) To understand the difference between two variables
	(c)	To understand the difference between various variables	(d) To understand the relationship between two variables
7.	What is the major attribute of Correlation Analysis?		
	<input checked="" type="radio"/> (a)	Association among variables	(b) Difference among variables
	(c)	Regression among variables	(d) Variations among variables
8.	The degree of freedom for paired t-test based on n pairs of observations is:		
	(a)	$2n - 1$	<input checked="" type="radio"/> (b) $n - 1$
	(c)	$n - 2$	(d) $2(n - 1)$
9.	The difference between the expected value of a statistic and the value of the parameter being estimated is called a:		
	(a)	Sampling error	(b) Standard error
	<input checked="" type="radio"/> (c)	Bias	(d) Non-sampling error
10.	Observation is a direct method of collecting:		
	<input checked="" type="radio"/> (a)	Primary data	(b) Secondary data
	(c)	Both Primary & Secondary Data	(d) Published data
11.	In order to pursue the research, which of the following is priorly required?		
	(a)	Developing a research design	(b) Formulating a research hypothesis
	(c)	Deciding about the data analysis procedure	<input checked="" type="radio"/> (d) Formulating a research problem



12.	What are the core elements of a Research Process?			
	(a)	Research Plan; Research Data; Analysis; References	(b)	Executive Summary; Literature Review; Data Gathered; Conclusions; Bibliography
	(c)	Introduction; Literature Review; Research Methodology; Results; Discussions and Conclusions	(d)	Introduction; Data Collection; Data Analysis; Conclusions and Recommendations
13.	The value of piloting a questionnaire is that it helps you to:			
	(a)	Identify and amend any problems in the question wording, order and format	(b)	Find out what a trained pilot would think of the subject matter
	(c)	Test out your questions on some of the people who will be in the final sample	(d)	All of the above
14.	Which one among the following statement is true in the context of the testing of hypotheses?			
	(a)	It is only the alternative hypotheses that can be tested	(b)	It is only the null hypotheses that can be tested
	(c)	Both the alternative and the null hypotheses cannot be tested	(d)	Both the alternative and the null hypotheses can be tested
15.	A Hypothesis from which no generalization can be made is:			
	(a)	Null Hypothesis	(b)	Analytical Hypothesis
	(c)	Barren Hypothesis	(d)	Descriptive Hypothesis
16.	In which sample population is divided into different strata and sample is taken from different strata?			
	(a)	Stratified sampling	(b)	Quota Sampling
	(c)	Purposive Sampling	(d)	Snow ball sampling
17.	Mean, Median and Mode are			
	(a)	Measures of deviation	(b)	Ways of sampling
	(c)	Measures of central tendency	(d)	None of the above

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18.	A formal document that presents the research objectives, design of achieving these objectives, and the expected outcomes/deliverables of the study is called:			
(a)	Research design	(b)	Research proposal	
(c)	Research hypothesis	(d)	Research report	
19.	A null hypothesis is:			
(a)	When there is no difference between the variables	(b)	Subjective in nature	
(c)	When there is difference between the variables	(d)	The same as research hypothesis	
20.	A variable that is presumed to cause a change in another variable is called:			
(a)	Extraneous variable	(b)	Dependent variable	
(c)	Independent variable	(d)	none of these	
21.	The standard error is a statistical measure of:			
(a)	The clustering of scores at each end of a survey scale	(b)	The normal distribution of scores around the sample mean	
(c)	The degree to which a sample has been accurately stratified	(d)	The extent to which a sample mean is likely to differ from the population mean	
22.	What are the conditions in which Type-I error occurs?			
(a)	The null hypotheses get accepted even if it is false	(b)	The null hypotheses get rejected even if it is true	
(c)	Both the null hypotheses as well as alternative hypotheses are rejected	(d)	None of the above	
23.	SPSS is an acronym of the following?			
(a)	Statistical Package for the Social Sciences	(b)	Statistical Predictions for Social Sciences	
(c)	Sexual Preferences for the Sixties and Seventies	(d)	Sexual Performance and SAD Syndrome	



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24.	In SPSS, what is the "Data Viewer"?			
(a)	A table summarizing the frequencies of data for one variable	(b)	A dialog box that allows you to choose a statistical test	
(c)	A spreadsheet into which data can be entered	(d)	A screen in which variables can be defined and labeled	
25.	The statistical test used when we want to test the significance of difference among more than two samples at the same time:			
(a)	Chi-square test	(b)	Z test	
(c)	F test	(d)	ANOVA	

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