

#### Date : 14.12.2024 Time: 2.00 pm to 5.00 pm Instructions:

Max. Marks: 70 Duration : 3 Hrs.

1. From Part A, contains 4 main questions (with 5 sub-questions) each question carries 1 mark Total of 20 marks

- 2. From part B answer any5 questions out of 5 questions. Each question carries 10 marks A totalof50 marks
- 4. Graph Sheet will be provided if required.

5. Use of standard calculator is permitted.

# **PART – A** (compulsory)

(Attempt all questions. Each sub-question carries 1 mark.)

Q. 1)	a. 1) Expand the following terms: [5 marks]									
a	)	SPSS	b) CSO	c) NIH	d) SAS	e) CAT	1			
Q. 2)	S	elect appro	priate opt	ion						
a	)	All of the fo	llowing are	e examples o	f secondary so	urces for litera	ture review EXC	EPT:		
	(i) Jo		(i	i) Books	(iii) Newspap	ers (iv)Conferer		nce proceedings		
b	)	Which of th	e following	g is an examp	ble of an interva	al scale?				
		(i) Rating of	f TV progr	am good/ave	rage/poor (	ii) Smoker yes	/no			
		(iii) Temper	ature in Fa	ahrenheit	(i	iv) Attitudinal s	core between 0-	-100		
		<u>.</u>								
С	)	Classes in	which up	per limits are	e excluded from	n the respecti	ve classes and	are included in the		
		immediate i	next class	are:		<i></i>				
		(i) Open-en	ded class	es (ii) Clo	se-ended class	ses (iii) Inclus	ive classes (iv)	Exclusive classes		
ام	•	What is NO	T a funati		: - 2					
a	)	(i) It reals no		on of a hypoti						
		(I) It replace	es the rese	earch problem	) harablara and	anhanaaa ahii				
		(ii) It provides focus to the research problem and enhances objectivity								
		(iii) It enables to specifically conclude what is true and what is faise								
		(iv) it ensur	es only in	ormation hee		iected				
~	•	The compli	na nantion	in the recent	oh proposol po	odo to provida	information abo	x1 1 <del>4</del>		

- e) The sampling section in the research proposal needs to provide information about ------(i) The software used (ii) The sampling population
  - (iii) The type of analysis used (iv) The names of participants

## Q. 3) State 'True' or 'False'

## [5 marks]

- a) In an organization, managing a dilemma does not help in taking business decisions.
- b) Quota sampling is an example of non-probability sampling method.
- c) Schedule method of data collection is same as questionnaire method
- d) Measures of central tendency and dispersion are sufficient to study the frequency distribution of a data series
- e) Population can be either finite or infinite

Q. 4) Match the following			[5 marks]		
	Column A		Column B		
	1	Experimental studies		А	Secondary source
	2	Empirical research		В	Integrity
	3	Newspapers		С	Hypothesis testing
	4	Questionnaire		D	Data collection
	5	Ethics in Research		Е	Knowledge through observation



# [20 marks]

Dec 2024

[50 marks]

#### (Attempt any 5. Each question carries 10 marks)

Q. 5)

#### $(2 \times 5 = 10 \text{ marks})$

- a) Basic Research is carried for the purpose of expanding our knowledge in any subject whereas Applied Research is carried out for solving practical problems of the world. Explain this statement indicating the areas where these types of research can be conducted, with suitable examples.
- b) Identifying a research problem is the first step to be taken before proceeding with research process. Explain what factors you would take into account for identifying your research problem.

#### Q. 6)

#### $(2 \times 5 = 10 \text{ marks})$

- a) All researchers need a research design for conducting research. Explain this statement bringing out the points regarding the need for research design.
- b) Explain how will you select a sampling method for your research study. Discuss some common probability sampling methods.

#### Q. 7)

#### $(2 \times 5 = 10 \text{ marks})$

- a) Explain why measurement scales are needed in research study. Discuss the characteristics of Nominal scale and Ordinal scale with examples of applications of these scales.
- b) Every type of research needs collection of data which should be sufficient, useful, and relevant. In this context, discuss the questionnaire method of data collection bringing out its advantages and disadvantages.

## Q. 8)

#### $(2 \times 5 = 10 \text{ marks})$

- a) While creating questionnaires, the researcher should be aware of the errors which may occur during responses. Explain some of the common types of errors which may occur in the responses.
- b) Find the coefficient of correlation between advertising expenditure (in 1000 Rs.) and actual sales (in 1000 Rs.) given below:

Advertising Expenditure	3	7	4	2	1	4	1	2
Sales	11	16	9	4	7	6	3	8

## Q. 9)

## $(2 \times 5 = 10 \text{ marks})$

- a) A hypothesis is a statement regarding the relationship that exists between two or more variables. In this context, explain the different types of hypotheses.
- b) It is a guess that 20% of passengers in unreserved coaches travel without tickets. In a week, checking the tickets of 256 passengers selected at random from different coaches of different passenger trains, 36 passengers were found without tickets. Would you regard the guess of 20% as true? (Use 5% level of significance, Z = 1.96)

## Q. 10)

## $(2 \times 5 = 10 \text{ marks})$

- a) Parametric tests are statistical measures used in the analysis to solve a research problem. In this context explain about z-test and t-test and their applications.
- b) Explain the concept of non-parametric tests and the areas where these tests can be applied. Name the different types of non-parametric tests,

b) F-test

## Q. 11)

- a) What is a research report? Discuss some common types of written research reports.
- b) What is a chi-square test? Discuss the common types of chi-square tests.

#### Q. 12) Write Short Notes on (Any Two)

## $(2 \times 5 = 10 \text{ marks})$

 $(2 \times 5 = 10 \text{ marks})$ 

- a) Correlation Analysis
- b) Null Hypothesis and Alternative Hypothesis d) Different charts used in data analysis