

(Duration: 3 Hours)

(Marks: 100)

- N.B. 1. All questions are compulsory.  
2. Each question carries 20 marks.  
3. Use of simple calculator is allowed.

Q.1 Attempt any two of the following: 20

- A Discuss on the Scatter diagram  
B Compute Spearman's Coefficient of Rank Correlation for the following data.

X	60	30	37	30	42	37	55	45
Y	50	25	33	27	40	33	50	42

C Compute four years moving averages for the following data.

Year	2011	2012	2013	2014	2015	2016	2017	2018
Savings (In Crores Rs)	51	53	56	55	58	62	61	65

Q.2 Attempt any two of the following: 20

- A Discuss on the Limitation of index numbers.  
B Calculate Laspeyre's and Paache's index number for the following data:

Commodity	Base Year		Current Year	
	Price (Rs.)	Quantity	Price (Rs.)	Quantity
A	5	50	10	40
B	4	10	9	2
C	3	5	8	1

C Calculate the Cost of living index number for the following data:

Commodity	Price in 2015	Price in 2020	Weight
A	52	62	10
B	65	58	12
C	85	82	8
D	30	36	10
E	100	120	11

Q.3 Attempt any two of the following: 20

- A What are the types of hypothesis?  
B Explain the role of hypothesis in research.  
C Discuss various criteria of a good hypothesis

Q.4 Attempt any two of the following: 20

- A Explain the types of research report.  
B Discuss the concept plagiarism in research  
C Discuss the principles of Research Report.

Q. 5 A) Answer the following questions.

20

- A Explain the Components of time series
- B Explain the Uses of index numbers
- C Write a note on Level of Significance.
- D Explain the various steps in writing a Research Report.

OR

Q.5. B) Multiple choice questions.

20

- 1 When an increase or decrease in one of the elements has no effect on the other variable, it is called ----- correlation.  
A) Negative B) Positive C) Zero D) Linear
- 2 When a correlation is observed using only two variables at the same time, it is called ----- correlation.  
A) Non-linear B) Linear C) Simple D) Partial
- 3 In the regression equation,  $b_{xy}$  is -----  
A) Regression coefficient of  $x$  on  $y$  B) Regression coefficient of  $y$  on  $x$  C) Regression coefficient of  $a$  on  $b$  D) Regression coefficient of  $b$  on  $a$
- 4 ----- is an important factor in causing seasonal variation  
A) year B) month C) atmosphere D) Time
- 5 The study of ----- is very important in time series analysis  
A) Index numbers B) Correlation C) Demand D) Seasonal variation
- 6 Consumer's Price index number is also known as -----  
A) Fisher's index number B) Laspeyre's Index number C) Paasche's Index number D) Gost of living index number
- 7 Index numbers are not used to measure changes in -----  
A) cost of living B) wholesale prices C) quality D) real income
- 8 If the income is Rs. 4200 and index number (IN) = 140 for the year 2019, then the real income for the year would be = -----  
A) 300 B) 350 C) 3000 D) 3500
- 9 In ----- index number, the current year of an index number is the base year for the next year.  
A) Chain base B) Price C) simple D) weighted
- 10 Index number is also called as -----  
A) economic barometer B) parameter C) constant D) slope
- 11 The following statement is true regarding hypothesis.  
A) The hypothesis should be clear B) Hypothesis requires empirical. C) The hypothesis should be complicated D) Option 1 and option 2
- 12 The hypothesis is useful for ----- conclusions in research.  
A) Analytical B) logical C) Applied D) Exploratory
- 13 ----- hypotheses are based on social values.  
A) Empirical B) Research C) Scientific D) General



- 14 Alternative hypotheses are represented by \_\_\_\_\_  
A) H B) H<sub>2</sub> C) H<sub>0</sub> D) H<sub>1</sub>
- 15 A \_\_\_\_\_ is a type of statistical hypothesis that proposes that no statistical significance exists in a set of given observations.  
A) Alternative Hypothesis B) Null Hypothesis C) Assumption D) None of these
- 16 Research objectives should be \_\_\_\_\_ in the research report.  
A) Optimum B) More C) Limited D) Inconsistent with Subject
- 17 \_\_\_\_\_ is required to understand the context in the research report.  
A) Index B) Footnotes C) Page Number D) Presentation
- 18 From the research method, the reader gets an \_\_\_\_\_ idea of the researcher's research work.  
A) Blurred B) primary C) wide D) Detailed
- 19 The maps in the research report show the distribution of \_\_\_\_\_ information.  
A) Political B) educational C) cultural D) regional
- 20 In informal report, they are:  
A) Less detailed B) Complicated detailed C) In-structured any way D) All of these

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