Enrollment No...................................

Faculty of Science
End Sem (Even) Examination May-2022
SC6RD01 Research Methodology

Programme: Ph.D. (Course Work)   Branch/Specialisation: All

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1   i.   Which part of research report is written at the end: **1**
        (a) Title   (b) Literature review
        (c) Bibliography   (d) Abstract

   ii.   Purpose of doing research is: **1**
        (a) Identification of problem
        (b) Finding solution of problem
        (c) Both identification and finding solution of problem
        (d) None of these

  iii.   Research formulation is: **1**
        (a) Translating and transforming of selected research problem into scientifically researchable question
        (b) Selection of literature review
        (c) Collection of data for research
        (d) Selection of technique and method

   iv.   Which of the following is the first page of the research report?   **1**
        (a) Appendix   (c) Bibliography
        (b) Index   (d) Title Page

   v.   Method used for data collection is: **1**
        (a) Observation   (b) Previous records
        (c) Surveys   (d) All of these

   vi.   Difference between actual value and real value is termed as: **1**
        (a) Precession   (b) Error
        (c) Correlation   (d) None of these

vii. True statement regarding sampling is: **1**
    (a) Sampling is a part of population
    (b) Sampling saves time, money and energy
    (c) Sampling helps in estimating sampling error
    (d) All of these

viii. Which of the following sample, parametric test (T-test) is useful: **1**
    (a) When coefficient of population is zero
    (b) Sample size is less than 30
    (c) Sample size is large
    (d) Mean of the sample is in the range

ix. Different steps involved in writing of research report are: **1**
    (a) Logical analysis of the subject matter
    (b) Preparation of final outline
    (c) Preparation of rough draft
    (d) All of these

x. List of books referred in research report is termed as: **1**
    (a) Biography   (b) Bibliography
    (c) Foot note   (d) Abstract

Q.2 i. What do you mean by qualitative research? How is it different from quantitative research? **3**

ii. Write the differences between research area of social science and natural science. Discuss in brief about theoretical and experimental research. **7**

OR iii. What is computational research? Describe applied and action research in detail. **7**

Q.3   Attempt any two:

i. Define formulation of research problem. Discuss any four important points which must be observed by a researcher in selecting research problem. **5**

ii. How can you identify the gap area of research? Write any four importance of literature review. **5**

iii. What is a literature review? Describe in brief about writing of literature review. **5**

Q.4 i. Differentiate and correlate the term validity and reliability of data. **4**

ii. What are the different tools to measure the data? Describe any three types of statistical methods for data interpretations. **6**

OR iii. List any five types of data collection methods. Discuss any 3 types of statistical methods for data interpretations. **6**

Q.5   Attempt any two of followings:

i. Write a brief note on plagiarism checking software. **5**

ii. Describe different types of errors with suitable examples. **5**

iii. Give a brief account on scientific software's. **5**

Q.6 i. What is research report? Describe different types of research report. **4**

ii. List the different types of research report. Describe the different steps involved in writing of research report. **6**

OR iii. Describe any two ways for presentation of project report. **6**

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Scheme of Marking

Faculty of Science

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SC6RD01 Research Methodology

Programme: Ph.D. (Course Work)	Branch/Specialisation: Science

Note: The Paper Setter should provide the answer wise splitting of the marks in the scheme below.

Q.1	i)	Which part of research report is written at the end: (b) Literature review (c) Bibliography	1
	ii)	Purpose of doing research is: (c) Both identification and finding solution of problem	1
	iii)	Research formulation is: (a) Translating and transforming of selected research problem in to scientifically researchable question	1
	iv)	Which of the following is the first page of the research report ? (d) Title Page	1
	v)	Method used for data collection is: (d) By all the given options	1
	vi)	Difference between actual value and real value is termed as: (b) Error	1
	vii)	True statement regarding sampling is: (d) All of the above	1
	viii)	Which of the following sample, parametric test (T-test) is useful: (b) Sample size is less than 30	1
	ix)	Different steps involved in writing of research report are: (d) All the given options are involved	1
	x)	List of books referred in research report is termed as: (b) Bibliography	1
Q.2	i.	What do you mean by qualitative research? (1.5 marks) How is it different from quantitative research? (1.5 marks)	3
	ii.	Write the differences between research area of social science and natural science. (3 marks) Discuss in brief about theoretical and experimental research. (4 marks)	7
OR	iii.	What is computational research? (3 marks)	7

		Describe applied and action research in details. (5 marks)	
Q.3	i.	Define formulation of research problem. (1 mark) Discuss any 4 important points which must be observed by a researcher in selecting research problem. (4 marks)	5
	ii.	How can you identify the gap area of research? (3 marks) Write 4 importance of literature review. (2 marks)	5
OR	iii.	What is a literature review? (2 marks) Describe in brief about writing of literature review. (3 marks)	5
Q.4	i.	Differentiate (2 marks) and correlate the term validity and reliability of data. (2 marks)	4
	ii.	What are the different tools to measure the data? (1.5 marks) Describe any three types of statistical methods for data interpretations. (4.5 marks)	6
OR	iii.	List any 5 types of data collection methods. (2 marks) Discuss any 3 types of statistical methods for data interpretations. (4 marks)	6
Q.5		Attempt any two:	
	i.	Write a brief note on plagiarism checking software. (5 marks)	5
	ii.	Describe different types of errors with suitable examples. (5 marks)	5
	iii.	Give a brief account on scientific softwares. (5 marks)	5
Q.6	i.	What is research report? (1 mark) Describe different types of research report. (3 marks)	4
	ii.	List the different types of research report. (2 marks) Describe the different steps involved in writing of research report. (4 marks)	6
OR	iii.	Describe any two ways for presentation of project report. (3 marks + 3 marks)	6

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