Survey Questionnaire on Basic Information

|  |  |  |
| --- | --- | --- |
| Questionnaire No. |  |  |
|  |  |  |

Section A: Basic Information

A1. Residence: [SA]

|  |  |
| --- | --- |
| Rural 1 | Urban 2 |

A2. Ecological Region

|  |  |  |
| --- | --- | --- |
| Mountain | Hill | Tarai |
| 1 | 2 | 3 |

A3. Development Region

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| EDR | CDR | WDR | MWDR | FWDR |
| 1 | 2 | 3 | 4 | 5 |

A4. Sex: [SA]

|  |  |
| --- | --- |
| Female 1 | Male 2 |

A5. How many members (residing permanently) are there in your family? …………

A6. Age: \_\_\_\_\_\_\_\_\_\_ [Completed age in years]

A7. Among the various incomes generating an activity which is the most income generating activity?

|  |  |
| --- | --- |
| Agriculture | 1 |
| Industry/Business | 2 |
| Service in the country | 3 |
| Remittance (service outside the country) | 4 |
| Wage-labor in the locality | 5 |
| Retirement pension | 6 |
| Other (specify) | Xx |

A8. How many members of your household contributing to your household income? ----------------------

|  |  |
| --- | --- |
| Number of family members |  |

A9. What is your mark in the midterm exam of Data Analysis for managerial decisions? -------

A10. In which program did you completed your undergraduate degree?

|  |  |
| --- | --- |
| Management | 1 |
| Science | 2 |
| Humanities | 3 |
| Education | 4 |

A11. What is the monthly income of your households?

|  |  |
| --- | --- |
| Income |  |

A12. While considering all things, what is the average monthly expenditure of your family? .............................. (InRs.)

A13. Except the college time, on an average how many hours you study in a day?

|  |  |
| --- | --- |
| Time in hrs. |  |

**Database of basic information**

In the database each column represent the variable and each row represent the case for example: if someone is collecting information on 100 different variables from 300 peoples then in the database there will be 100 columns and 300 cases. In our survey questionnaire, we collect data on 13 different variables from 29 class participants so there are 13 columns and 29 row/case The first column "QN" is the id of the respondents which is the most import key and is unique for each respondents In any statistical software, the responses captured in the questionnaire will take shape as shown in the spreadsheet**.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| QN | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 | A13 |
| 1 | 2 | 2 | 2 | 2 | 3 | 24 | 3 | 2 | 32 | 1 | 20000 | 20000 | 2 |
| 2 | 2 | 2 | 2 | 1 | 4 | 23 | 7 | 4 | 56 | 1 | 55000 | 50000 | 1 |
| 3 | 2 | 2 | 2 | 1 | 5 | 24 | 3 | 2 | 29 | 1 | 40000 | 25000 | 3 |
| 4 | 2 | 2 | 3 | 1 | 3 | 23 | 6 | 2 | 56 | 1 | 36000 | 30000 | 4 |
| 5 | 1 | 2 | 1 | 2 | 3 | 26 | 1 | 3 | 27 | 1 | 13000 | 10000 | 4 |
| 6 | 2 | 3 | 5 | 1 | 6 | 24 | 3 | 3 | 52 | 1 | 45000 | 40000 | 3 |
| 7 | 2 | 2 | 2 | 2 | 4 | 28 | 3 | 2 | 58 | 1 | 100000 | 40000 | 2 |
| 8 | 2 | 2 | 2 | 2 | 4 | 23 | 2 | 6 | 32 | 1 | 200000 | 180000 | 1 |
| 9 | 2 | 3 | 2 | 2 | 4 | 21 | 3 | 1 | 36 | 1 | 30000 | 20000 | 2 |
| 10 | 2 | 2 | 2 | 2 | 4 | 24 | 2 | 1 | 37 | 1 | 50000 | 30000 | 2 |
| 11 | 2 | 2 | 1 | 2 | 5 | 24 | 6 | 5 | 51 | 2 | 44000 | 40000 | 2 |
| 12 | 2 | 2 | 2 | 2 | 4 | 24 | 3 | 1 | 24 | 1 | 70000 | 50000 | 1 |
| 13 | 2 | 2 | 2 | 2 | 18 | 26 | 5 | 8 | 35 | 1 | 150000 | 100000 | 3 |
| 14 | 2 | 2 | 2 | 1 | 4 | 22 | 3 | 1 | 60 | 1 | 35000 | 25000 | 2 |
| 15 | 2 | 2 | 3 | 1 | 4 | 23 | 2 | 2 | 45 | 1 | 30000 | 25000 | 4 |
| 16 | 2 | 3 | 1 | 2 | 4 | 22 | 3 | 2 | 23 | 1 | 30000 | 10000 | 2 |
| 17 | 2 | 2 | 2 | 1 | 3 | 22 | 2 | 2 | 57 | 1 | 28000 | 25000 | 3 |
| 18 | 1 | 3 | 1 | 1 | 6 | 24 | 3 | 2 | 49 | 1 | 30000 | 25000 | 4 |
| 19 | 2 | 2 | 2 | 2 | 4 | 30 | 2 | 3 | 40 | 3 | 90000 | 40000 | 1 |
| 20 | 2 | 2 | 1 | 1 | 5 | 26 | 2 | 5 | 20 | 1 | 40000 | 35000 | 1 |
| 21 | 2 | 3 | 2 | 2 | 4 | 23 | 2 | 1 | 32 | 1 | 30000 | 20000 | 1 |
| 22 | 2 | 3 | 3 | 2 | 3 | 23 | 4 | 1 | 36 | 1 | 10000 | 10000 | 3 |
| 23 | 2 | 2 | 2 | 2 | 4 | 25 | 3 | 1 | 21 | 1 | 50000 | 50000 | 3 |
| 24 | 2 | 2 | 2 | 1 | 4 | 23 | 2 | 3 | 23 | 1 | 50000 | 45000 | 3 |
| 25 | 2 | 3 | 1 | 2 | 3 | 24 | 1 | 1 | 57 | 1 | 45000 | 30000 | 3 |
| 26 | 2 | 2 | 2 | 1 | 4 | 23 | 3 | 3 | 60 | 1 | 50000 | 30000 | 3 |
| 27 | 2 | 2 | 2 | 1 | 3 | 24 | 2 | 2 | 35 | 1 | 40000 | 10000 | 1 |
| 28 | 2 | 2 | 3 | 2 | 5 | 25 | 2 | 1 | 55 | 2 | 60000 | 50000 | 3 |
| 29 | 2 | 2 | 2 | 1 | 8 | 24 | 3 | 2 | 25 | 1 | 55000 | 50000 | 6 |

**Referring to "Survey Questionnaire on Basic Information", answer the following questions of sections 1 and 3.**

**Section: 1**

Q1. In which scale the response (data) of the variable (questions) A1 is measured?

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q2. In which scale the response (data) of the variable (questions) A3 is measured?

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q3. In which scale the response (data) of the variable (questions) A5 is measured?

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

**Section: 2**

Q4. If someone is collecting the data under the variable "sex”, then the research will call it qualitative or quantitative variable.

|  |  |
| --- | --- |
| Qualitative variable | 1 |
| Quantitative variable | 2 |

Q5. If someone is collecting the data under the variable "sex", then the research will say that data under this variable is measured in

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q6. If someone is collecting the data under the variable "age”, then the research will call it qualitative or quantitative variable.

|  |  |
| --- | --- |
| Qualitative variable | 1 |
| Quantitative variable | 2 |

Q7. If someone is collecting the data under the variable "age", then the research will say that data under this variable is measured in

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q8. If someone is collecting the data under the variable "age”, then the research will call it qualitative or quantitative variable.

|  |  |
| --- | --- |
| Qualitative variable | 1 |
| Quantitative variable | 2 |

Q9. If someone is collecting the data under the variable "age", then the research will say that data under this variable is measured in

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q10. If someone is collecting the data under the variable "temperature", then the research will call it qualitative or quantitative variable.

|  |  |
| --- | --- |
| Qualitative variable | 1 |
| Quantitative variable | 2 |

Q11. If someone is collecting the data under the variable "temperature ", then the research will say that data under this variable is measured in

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q12. If someone is collecting measuring the level of satisfaction of the people on their income in a scale of 1 to 5,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strongly dissatisfied | Dissatisfied | Neutral | Satisfied | Strongly satisfied |
| 1 | 2 | 3 | 4 | 5 |

Then research will call it qualitative or quantitative variable.

|  |  |
| --- | --- |
| Qualitative variable | 1 |
| Quantitative variable | 2 |

Q13. If someone is collecting measuring the level of satisfaction of the people on their income in a scale of 1 to 5,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Strongly dissatisfied | Dissatisfied | Neutral | Satisfied | Strongly satisfied |
| 1 | 2 | 3 | 4 | 5 |

Then research will say that data are measured in.

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

Q14. Rank the following fruits in terms of your own preference

|  |  |
| --- | --- |
| Fruits | Rank |
| Banana |  |
| Orange |  |
| Apple |  |

Then research will say that data are measured in.

|  |  |
| --- | --- |
| Nominal scale | 1 |
| Ordinal scale | 2 |
| Interval scale | 3 |
| Ratio scale | 4 |

**Section: 3**

Q15. How many variables are measured in nominal scale?

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Q16. How many variables are measured in ordinal scale?

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Q17. How many variables are measured in interval scale?

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Q18. How many variables are measured in ratio scale?

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Q19. How many variables are qualitative or non-metric?

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Q20. How many variables are quantitative or metric?

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**Section: 4**

Important Basic Concept on Data Analysis:

1. **Univariate data analysis**: In univariate data analysis researcher analyzed single variable at time. For example-

**For qualitative variables:**

The researcher analyzed qualitative variable by finding the frequency and percent distribution for each category.

Table, pie chart, bar-char and side by side bar chart can be used to present the findings of such variables.

**For quantitative variables:** The researcher can analyzed the quantitative variables by finding descriptive statistics such as mean, mode, median, and standards deviation. The most widely used tools are mean and standard deviation of the variable. While presenting the finding of this variables: tables, Histogram, box and whisker plot, and bar diagram can used according to the nature of the findings.

1. **Bivariate Data Analysis:** In bivariate data analysis researcher analyzed two variables at a time to find the cause and effect of one variable to other variable. Under this technique various statistical tools can be applied such as covariance, correlation coefficients, t-test, z-test, chi-square test, simple regression, binary logistic regression, one way ANOVA etc. While doing the bivariate data analysis caution should be taken to select the appropriate tools of statistics since which statistical tool is appropriate is based on measurement scale of data (nominal, ordinal, interval, and ratio scale).
2. **Multivariate Data Analysis:** In multivariate data analysis researcher analyzed three or more variables at a time to find the cause and effect of one set of variables to other variables. Under this technique various statistical tools can be applied such as multiple correlation coefficients, partial correlation coefficients, multiple regressions, binary logistic regression, two way ANOVA, ANCOVA, MANOVA etc. While doing the multivariate data analysis caution should be taken to select the appropriate tools of statistics since which statistical tool is appropriate is based on measurement scale of data (nominal, ordinal, interval, and ratio scale).

**Section 5: using the above database answerer the following questions.**

1. Find the mean and standard deviation of the variable "A9" and interpret it. Check whether the mean and standard deviation of A9 is varied by the variable A4.
2. Construct the frequency and percent distribution table of the variable A4 and A11. And also interpret the table.
3. **Dataset 1**
4. The dataset 1 contains the data on five variables collected from 6 respondents. Do the analysis of the dataset 1 using appropriate tools of univariate data analysis such as mean, standard deviation, range, and frequency and percent distribution as per the nature of data under the variables.
5. Sex: 1= male and 2 = Female

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SN | Sex | Income | education | Age | expenditure |
| 1 | 2 | 48 | 14 | 24 | 23 |
| 2 | 1 | 50 | 10 | 40 | 25 |
| 3 | 1 | 45 | 4 | 21 | 30 |
| 4 | 1 | 29 | 17 | 23 | 20 |
| 5 | 2 | 46 | 9 | 29 | 16 |
| 6 | 1 | 30 | 11 | 32 | 14 |

**Questions:**

Q1. Determine the qualitative and quantitative variables of the dataset 1.

Q2. Which techniques are used to analyze the qualitative variable under univariate data analysis method?

Q3. Which techniques are used to analyze the quantitative variable under univariate data analysis method?

Q4. Analyze and interpret the dataset 1 by using univariate data analysis techniques.

Q5. Present the findings by creating the summary tables and interpret it.

Q6. Present the finding using suitable diagram