**Question 1: Select the best answer for each of the following statement: (10 points)**

1- Data that can be classified according to color are measured on ……..scale

A-Nominal B- Ratio C- Ordinal D- Interval

2- When the collected data is grouped with reference to time ,we have ……

A-Quantitative classification B- Qualitative classification
C- Geographical classification D- Chorological classification

3- A study was done to determine the age, number of times per week, and the duration (amount of time) of residents using a local park in San Jose. The first house in the neighborhood around the park was selected randomly and then every eighth house in the neighborhood around the park was interviewed. The sampling method was:

A-Simple random B- Systematic C- Stratified D- Cluster

4- Five establishments are to be selected from a list of 50 establishments by systematic random sampling. If the first number is 7, the next one is……

A- 8 B- 16 C- 21 D- 17

5- Which of the following is quantitative data?

A-Gender B- Brand of cell phone C- type of car D- fuel economy (MPG)

**Question 2: if you have the following data: (10 points)**

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 40 | 50 | 8 | 20 | 25 | 50 | 60 | 71 | 15 | 20 | 45 | 55 | 24 | 69 | 61 | 33 | 30 | 31 | 20 |

Find: 1- frequency table 2- Relative frequency and percental RF

3- Ascending & Descending 3- Draw histogram & polygon for the data

**Question 3: In a school of 580 students, I want to sample 40 students and want all grades appropriately represented. How many should I ask in each grade? (10 points)**

| Grade | $9^{th}$ | $10^{th}$ | 11th | $12^{th}$ |
|---|---|---|---|---|
| Frequency | 120 | 150 | 130 | 180 |

**Question 4define each of the following terms:**

1/ Statistics , 2/ Population , 3/ Sample , 4/ Raw data , 5/ Quantitative variables

## Question 5: Answer the following questions:

1- Diagram of Scientific Research

2- Types of data with example

**Question 6: If you have a data**

| Class | 26-29 | 30-33 | 34-37 | 38-41 | 42-45 | 46-49 |
|---|---|---|---|---|---|---|
| $f_i$ | 5 | 12 | 11 | 9 | 5 | 3 |

Find:

1- Median
2- Mode

**Question 7: If you know**

| $x_i$ | 5 | 7 | 6 | 5 | 4 | 3 |
|---|---|---|---|---|---|---|
| $y_i$ | 9 | 5 | 7 | 8 | 9 | 10 |

Find:

1- $r_{xy}$
2- CV

**Question 8 If you know:**

| $x_i$ | 3 | 4 | 2 | 6 | 7 | 4 | 2 | Total | 28 |
|---|---|---|---|---|---|---|---|---|---|
| $y_i$ | 6 | 8 | 4 | 10 | 13 | 5 | 3 | Total | 49 |

Find:

1- Regression Model 2- $e_i$