



Mathematics Department - Fall 2018 - STAT 2311 First Exam

St. Name (in Arabic): Key B St. Number: Sec:

Question # 1. Fill in the blank and multiple choice questions:

- The variable "Business Sector" (1. Private, 2. Public) is
 - Quantitative
 - Qualitative
- The measurement Scale for the variable "Type of school: 1. Private 2. Public" is
 - Interval
 - Nominal
 - Ratio
 - Ordinal
- A Sample is a subset of the population.
- Time series data is collected over several regular time intervals.
- To summarize data about Majors التخصصات at BZ University we use:
 - Cross Tabulation
 - Scatter Plot
 - Bar Graph (Bar Chart)
 - Ogive
- To study the relationship between "Price" and "Quantity Supplied", the appropriate method is:
 - Cross Tabulation
 - Cross-Sectional data
 - Scatter Plot
 - Pie Chart

Question #2: If the scores of 24 students are distributed in the following table:

Score	Frequency
0—19	2
20—39	5
40—59	10
60—79	5
80--99	2
Total	24

- What is the variable Name : Score
- What is the class width ? : 20
- How many classes are there ? : 5
- What is the sample size ? : 24

5. What is the **relative frequency** of class « 40 -59 » : $\frac{10}{24} = 0.417$
6. What percentage of students got a score of 59 or less: $\frac{17}{24} = 0.708 = 70.8\%$
7. What is the **shape** of the Distribution ?
- a. Left Skewed b. Symmetric c. Right Skewed

Question # 3

Data on Education level and monthly salary of workers in Jawwal company follow:

Education Level	Monthly Salary in NIS			Total
	1000--2999	3000--4999	5000--7999	
Tawjihi	20	15	1	36
College	30	40	20	90
University	25	35	54	114
Total	75	90	75	240

1. What is the **population** : Workers in Jawwal Company
2. How many **elements** are there in the population ? : 240
3. How many **variables** are there in this table ? : 2
4. What **percentage** of workers completed a **University degree**: $\frac{114}{240} \times 100\% = 47.5\%$
5. OF those workers who have a **University degree**, What **percentage** earns 5000-7999 NIS
- $\frac{54}{114} \times 100\% = 47.4\%$
6. **Based on the data in the cross-tabulation we conclude that:** (Circle the best answer).
- a) There is a negative relationship between Education level and monthly salary
- b) There is a positive relationship between Education level and monthly salary
- c) There is no relationship between Education level and monthly salary