

COMSATS University Islamabad
Department of Statistics
QUIZ 1

Course Title:	Statistics and Probability Theory			Course Code:	MTH262	3(3,0)
Name & Reg.	Muhammad Ali FA21-BCS-006				Maxime Time: 70 Minutes	
Semester:	SP23	Batch:	BCS-	Section: B	Dated	22-03-23
Instruction:	Present all necessary calculations.			Marks	30	

Q1. (4+3).

- Define and explain: i) Population, ii) simple random sample, iii) mutually exclusive classes, and iv) class boundaries.
- What are the major indicators of heterogeneity in data? Explain with examples.

Q2. (4+6)

Following are the number of all malfunctioning reported by randomly chosen end-user of newly launched software by the Digital media ltd during any given week of testing:

~~15, 27, 19, 34, 65, 54, 47, 60, 69, 56, 23, 5, 16, 25, 6, 18, 29, 58, 72, 45, 50~~

~~21, 22, 15, 12, 9, 17, 26, 21, 20, 19, 22, 28, 45, 29, 30, 20, 18, 27.~~

- Construct a grouped frequency distribution of equally spaced classes with class interval of 10 by tally method.
- Arrange the data in ascending order by Stem and Leaf diagram, find and interpret:
 - Median
 - Coefficient of Range.
 - Coefficient of decile deviation

Q 3. (3+3)

Suppose that a from a large software house employees' salary in Rupees thousands is collected from a sample of employees is given below:

Class Limits	18-27	28-37	38-47	48-57	58-67	68-77	78-87
No of Employees	40	75	85	270	150	190	50

For the given dataset find and interpret

- Mean Salary
- Mode salary.

Q 4. (3+4)

Five consecutive sessions of production were observed, each of production session is comprised of 1 hour duration, with following production rates: in first session 25 units/hour, in second session 30 units/hour, in third session 45 units/hour, in fourth session 35 units /hour and in fifth session 40 units/hour.

- Suggest and calculate the more appropriate measure of central tendency for the average production rate from either Arithmetic or Harmonic?
- Find the variance and standard deviation of production rate.

Good Luck