**Computer Science and Information Technology Department, UoB, Quetta**

**Course: Probability and Statistics**

**Terminal Exam 2020**

**BSCS (2019-23) Roll No: \_\_\_\_\_\_\_\_\_\_ Max marks: 70**

**NOTE: USE OF SMART PHONE AS CALCULATOR IS NOT ALLOWED.**

**Question No 1: Describe the following terms, where possible give examples (15)**

|  |  |  |  |
| --- | --- | --- | --- |
| Population, | Sample, | Descriptive Statistics, | Inferential Statistics, |
| Qualitative Variable, | Discrete Variable, | Continuous Variable, | Biased Error, |
| Primary Data, | Secondary Data, | Quantitative Variables, | Unbiased Error, |
| Tabulation, | Classification, | Histogram. |  |

**Question No 2: Construct a grouped frequency distribution using the following data. (10 Marks)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **106** | **107** | **76** | **82** | **109** | **107** | **115** | **93** | **187** | **95** | **123** | **125** |
| **111** | **92** | **86** | **70** | **126** | **68** | **130** | **129** | **139** | **119** | **115** | **128** |
| **100** | **186** | **84** | **99** | **113** | **204** | **111** | **141** | **136** | **123** | **90** | **115** |
| **98** | **110** | **78** | **185** | **162** | **178** | **140** | **152** | **173** | **146** | **158** | **194** |
| **148** | **90** | **107** | **181** | **131** | **75** | **184** | **104** | **110** | **80** | **118** | **82** |

**Question No 3-A: Calculate Mean, Median, Mode, Q1 and Q3 of the data given in Question 2. (10 Marks)**

**Question No 3-B: What is a box plot, draw a sample box plot and label Mean, Median, Mode in it. (5 Marks)**

**Question No 4: Calculate Variance and Standard Deviation of the data given in Question 2. (10 Marks)**

**Question No 5: Suppose we toss 3 fair coins, write down all the possible outcomes of this experiment? (10 Marks)**

**Question No 6: Two fair dice are thrown, what is the probability that the sum of the dots on two dice is greater than 8. (10 Marks)**