**Excel lesson plan along with assignments (20 hours long lab class)**

***Page/Illustration/Example/Exercise number are valid only for textbook Basic Statistics Using Excel @Kriti Publication***

***It is equally useful for all the textbooks just ignore mentioned Page/Illustration/Example/Exercise number***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Lesson** | **Illustration *Data*** (Sheet #) | **Assignment *Data*** (Sheet #) | **Time** |
| 1 | Construction of discrete frequency distribution  Construction of continuous frequency distribution  **(Chapter 3)** | p32 ***Ungroup*** (Sheet 2)  p34 ***Ungroup*** (Sheet 2) | Exercise 3  p39 # 8 ***Discrete 3*** (Sheet 3) | 1 hour |
| 2 | Simple, sub-divided, multiple, percentage bar chart, pie chart **(Chapter 4)** | p64 Illustration 1***Tourists*** (Sheet 4),  p66 Illustration 2 ***Income 3*** (Sheet 5),  p67 Illustration 3 ***Campus*** (Sheet 6),  p69 Illustration 4 ***Population*** (Sheet 7), p70 Illustration 5 **Area** (Sheet 8) | Exercise 4  # 1 ***Films*** (Sheet 16)  5 ***Family*** (Sheet 19)  #7 ***Investment*** (Sheet 20)  # 8 ***Building*** (Sheet 21) | 1 hour |
| 3 | Histogram for individual series using pivot table, histogram of continuous series and location of mode, frequency polygon with histogram, frequency curve with histogram, frequency polygon only **(Chapter 4)** | p73 Illustration 7 ***Age*** (Sheet 10)  p76 Illustration 8 ***Histogram*** (Sheet 11) | Exercise 4  #20 ***IQ Score*** (Sheet 25)  # 14 ***Gym*** (Sheet 22) | 1 hour |
| 4 | Less than ogive and location of positional values, number of respondents below/above/between some particular values, two ogives and location of median **(Chapter 4)** | pP79 Illustration 10 ***Profit*** (Sheet 13) | Exercise 4  #15 ***Sales commission*** (Sheet 23) | 1 hour |
| 5 | Stem-leaf-plot **(Chapter 4)** | p86 Illustration 11 ***Marks 5*** (Sheet 14) | Exercise 4  #20 ***IQ score*** (Sheet 25) | 1 hour |
| 6 | Measures of central tendency for individual series **(Chapter 5)** | ***Age 2*** (Sheet 135),  p132 Illustration 6 ***Position*** (Sheet 33) | Exercise ***5***  # 15a ***Individual*** (Sheet 41) | 1 hour |
| 7 | Measures of central tendency for discrete series **(Chapter 5)** | p116 Ex 23 ***Statistics*** (Sheet 132) | Exercise 5  # 16 ***Exchange*** (Sheet 42) |
| 8 | Measures of central tendency for continuous series **(Chapter 5)** | ***Central tendency*** (Sheet 133) | Exercise 5  # 17a ***Students*** (Sheet 43),  # 28 ***Daily wage*** (Sheet 46) |
| 9 | Application of measures of central tendency **(Chapter 5)** | p119 Ex 26 ***Application*** (Sheet 134) | Exercise 5  # 18 ***Recipients*** (Sheet 44),  # 19a ***Factory*** (Sheet 45) | 1 hour |
| 10 | Descriptive statistics using Analysis ToolPak **(Chapter 5)** | ***Weight*** (Sheet 136) | ***Light bulbs*** (Sheet 47) |
| 11 | Measures of dispersion for individual series **(Chapter 6)** | ***Age dispersion*** (Sheet 137) | ***Age 3*** (Sheet 138) | 1 hour |
| 12 | Measures of dispersion for discrete series **(Chapter 6)** | ***Discrete dispersion*** (Sheet 139) | Exercise 6  # 2 ***Member*** (Sheet 56),  # 8d ***Group*** (Sheet 59) |
| 13 | Measures of dispersion for continuous series **(Chapter 6)** | ***Dispersion*** (Sheet 140) | Exercise 6  # 3 ***Mid-point*** (Sheet 57)  #4a ***Wages*** (Sheet 58)  # 10 B***ulbs*** (Sheet 60) |
| 14 | Skewness & kurtosis (Karl Pearson’s and Bowley’s coefficient of skewness, and Kurtosis by ***Kurtosis is test of normality*** **(Chapter 7)** | p192 Illustration 2 ***Asset*** (Sheet 64)  [for Sk (P) and Sk (B)]  p196 Illustration 6 ***Light Bulbs 1*** (Sheet 68) | Exercise 7  # 10 ***Marks 6*** (Sheet 69),  # 14 ***Mid-value*** (Sheet 70) | 1 hour |
| 15 | Box-plot **(Chapter 7)** | ***Box-plot 1*** (Sheet 141) | ***Five-number 1*** (Sheet 142) | 1 hour |
| 16 | ***Correlation:***   1. Product Moment formula 2. Built-in formula 3. Scatter plot 4. Using Analysis ToolPak 5. Probable Error(PE) 6. Test of significance of (Rho) using PE 7. Limits of population correlation coefficient    Rank correlation coefficient for non-repeated and repeated observations **(Chapter 8)** | ***Correlation*** (Sheet 143) | Exercise 8  # 8 ***Height\_Weight*** (Sheet 79) also plot scatter-plot,  # 9 ***Expense*** (Sheet 80),  #19 ***Judges*** (Sheet 82),  # 20 ***Advertisement*** (Sheet 83) | 1 hour |
| 17 | ***Regression***:  Built-in function (Y on X, estimation of Y for given value of X, Syx , R2, X on Y, verification of ), interpretation of byx , Syx , R2 , Scatter-plot along with trend line (line of regression), regression model and R2.  Regression using Analysis ToolPak (Significance of regression model and regression coefficient) **(Chapter 9)** | ***Regression 1*** (Sheet 85) | Exercise 9  # 9 ***Operator*** (Sheet 87) also plot scatter-plot along with trend line, calculate R2 and interpret it.  # 10 ***Car*** (Sheet 88),  #12 ***BP 1*** (Sheet 89) | 1 hour |
| 18 | Permutation, combination, laws of probability, solving problems of probability using combination **(Chapter 10)** | p274 Illustration 5 ***Selection*** (Sheet 93), p285 Illustration 1 ***Problem*** (Sheet 97) | Exercise 10A  #7***Commission*** (Sheet 94)  # 9 ***Ladies*** (Sheet 95)  #12 ***Engineer*** (Sheet 96)  Exercise 10B  #4 ***Interview*** (Sheet 98)  #9 ***Husband*** (Sheet 99)  #10 ***Solve*** (Sheet 100) | 1 hour |
| 19 | Solving problems of probability for contingency table along with statistical independency **(Chapter 10)** | p293 ***HDTV*** (Sheet 145) | Exercise 10C  #1 ***Department*** (Sheet 146)  #2 ***Independency*** (Sheet 147) | 1 hour |
| 20 | Bayes’ theorem and Mathematical expectation  **(Chapter 10 and 11)** | p300 Illustration 3 ***Company 1*** (Sheet 103)  p309 Illustration 2 ***Coins*** (Sheet 108)  p310 Illustration 3 ***Suzuki*** (Sheet 109) | Exercise 10C  ***#11Manager*** (Sheet 105)  Exercise 11A  ***#1 Expectation*** (Sheet110)  #14 ***Admission*** (Sheet 111)  #15 ***Him (Sheet 112)***  #16 ***Contractor*** (Sheet 113) | 1 hour |
| 21 | Binomial distribution and fitting **(Chapter 11)** | ***Binomial*** (Sheet 148),  p322 Illustration 3 ***Fitting of Binomial*** (Sheet 115)  p323 Illustration 4 ***binomial 1*** (Sheet 117) | Exercise 11B  #12 ***Head*** (Sheet 118)  #16 ***Computer chips*** (Sheet 119) #20 ***Dice 1*** (Sheet 120) | 1 hour |
| 22 | Poisson distribution and its fitting and Normal distribution **(Chapter 11)** | ***Poisson Distribution***  ***Poisson*** (Sheet 149)  p328 Ex 18 ***Phone call*** (Sheet 150)  p329 Ex 22 ***Airport*** (Sheet 151)  p331 Ex 25 ***Fitting of Poisson*** (Sheet 152)  ***Normal distribution***  ***Exam*** (Sheet 160)  p350 Illustration 1 ***Intelligence*** (Sheet 156) | ***Poisson Distribution***  ***Car1*** (Sheet 153)  ***Mistakes*** (Sheet 122)  ***Telephone*** (Sheet 154)  ***Defective 1*** (Sheet 155)  ***Normal distribution***  ***IQ Test*** (Sheet 157)  ***Potato*** (Sheet 158)  ***Richest*** (Sheet 159) | 1 hour |
| 23 | Sampling distribution without replacement (finite population) and with replacement (infinite population) and its frequency and probability distribution  **(Chapter 12)** | P379 Illustration 1 ***Computer*** (Sheet 123)  ***SRSWR*** (Sheet 125) | ***Population 2*** (Sheet 144)  ***Number*** (Sheet 161) | 1 hour |
| 24 | CI for population mean and proportion for finite and infinite population **(Chapter 13)** | ***Infinite*** (Sheet 162)  ***Finite*** (Sheet 163)  ***Proportion finite*** (Sheet 164) | ***Problems finite*** (Sheet 126) | 1 hour |
| 25 | ***Hypothesis test:***   1. One sample mean test (one tail and two tail test; critical value approach, p-value approach and CI approach) 2. Two sample means test (one tail and two tail test (critical value and p-value approach) 3. One sample proportion test (one tail and two tail test (critical value and p-value approach) 4. Two sample proportions test(one tail and two tail test (critical value and p-value approach) **(Chapter 14)** | [***1 sample mean***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet130!A1)(Sheet 130)  [***2 sample means***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet131!A1)(Sheet 131)  [***1 proportion***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet128!A1)(Sheet 128)  [***2 proportions***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet129!A1)(Sheet 129) | ***One sample mean test***  [***Students 1***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet165!A1)(Sheet 165)  [***Pumpkin***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet166!A1)(Sheet 166)  (by all of the approaches)  ***Two sample means test***  [***Machine***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet167!A1)(Sheet 167)  [***Europe***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet168!A1)(Sheet 168)  [***BBA-F***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet170!A1)(Sheet 170)  (by critical and p-value approaches)  [***Light bulbs 2***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet169!A1)(Sheet 169)  ***One sample proportion test***  [***Bardiya***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet171!A1)(Sheet 171) [***Him 1***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet173!A1)(Sheet 173)  by the critical and p-value approaches  ***Two sample proportions test***  [***Oat***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet172!A1)(Sheet 172) [***Clothes***](file:///C:\Users\nirmal\AppData\Roaming\Microsoft\Excel\All%20Datafiles%20final%20(version%201).xlsb#Sheet174!A1)(Sheet 174) | 1 hour |

**\*The End\***