

**B.PHARM SEMESTER-II**  
**BASICS OF COMPUTER APPLICATIONS-II**  
**Subject code: 22200P5**  
**PRACTICAL (3 Hours / Week; 3 Credits, 45 Hours)**

**Exercises covering the following topics should be performed using any spreadsheet:**

<b>Sr. No.</b>	<b>Course Contents</b>	<b>Hours</b>
1.	To calculate the mean, median and mode of any given data.	<b>45</b>
2.	To calculate mean deviation, standard deviation and standard error of any given data.	
3.	To create data frequency table and cumulative frequency table of any given data.	
4.	Basic of modification in various types of charts includes Column, line, and pie, chart using spreadsheet.	
5.	Basic of modification in various types of charts includes bar area and scattered chart using spreadsheet.	
6.	To present various response data (e.g. drug therapy) graphically.	
7.	To prepare a semi log plot for given data (e.g. the first order kinetic process for degradation and finding dose in pharmacology).	
8.	To calculate correlation value for given data (e.g. Beers plot, dissolution data and in vivo data).	
9.	To calculate regression line for given data (e.g. beers plot, bioavailability data, drug stability data).	
10.	To Calculate the geometric mean for given data.	
11.	To perform F-test for the comparison of variance (e.g. two granulation process).	
12.	To perform one-sided t-test for given data (e.g. stability study data, bioavailability study or pharmacology based animal study).	
13.	To perform two-sided t-test for given data (e.g. stability study data, bioavailability study or pharmacology based animal study).	
14.	To apply one-way ANOVA for given data (e.g assay development, pharmacology based animal study).	
15.	To apply two-way ANOVA for given data (e.g assay development, pharmacology based animal study).	

**Books Recommended (Latest Editions):**

1. MS Office: Step by Step, Joyce Cox, Prentice Hall of India, New Delhi, 2007
2. R.K., P.C. Software for Windows 98 made simple – 8th Edition – 2002 – Tata, New Delhi.
3. Accessing and Analyzing Data with MS EXCEL, Cornell, Prentice Hall of India, New Delhi, 2007
4. Pharmaceutical Statistics: Practical and Clinical Applications, Fourth Edition, Sanford Bolton, Charles Bon, Marcel Dekker.
5. Methods in Biostatistics, B. K. Mahajan, Jaypee Brothers
6. Advanced mathematics and biostatistics, G C Patel, G. K. Jani, R. M. Chaudhary, Atul Prakashan, Ahmedabad