

**FACULTY OF SCIENCE**  
**M.Sc. I – Semester Examination, December 2014**

**Subject: Microbiology**  
**Paper – III: Biometry & Computers**

Time: 3 Hours

Max.Marks: 80

**Note: Answer all questions from Part-A and Part-B.**  
**Each question carries 4 marks in Part-A and 12 marks in Part-B.**

**PART – A (8 x 4 = 32 Marks)**  
**[Short Answer Type]**

- 1 Define probability and explain about the multiplication theorem of probability
- 2 Write about normal distribution and its uses in biology
- 3 Discuss about testing of hypothesis.
- 4 What is ANOVA and briefly discuss about it?
- 5 What is hardware and software? Briefly discuss.
- 6 Discuss about files and folders in windows.
- 7 Discuss about word processing
- 8 What do you understand about work book and work sheet in MS EXCEL?

**PART – B (4 x 12 = 48 Marks)**  
**[Essay Answer Type]**

- 9 a) What is sampling? Discuss about different sampling procedures used in biological sciences.  
**OR**

- b) i) What is correlation? Discuss briefly about the uses in biological data.  
 ii) For the following data calculate the Pearson correlation coefficient.

Cholestrol	5.0	6.2	6.8	6.7	6.4	5.9	5.5	6.0	10.0	8.5
Triglycerides	2.3	2.5	3.0	3.8	4.2	5.3	5.5	8.8	9.5	10.2

- 10 a) What do you understand about small and large sample tests? Discuss about student 't' independent sample test and its application in biology.  
**OR**

- b) What is Chisquare test and its usefulness in biology. For the following data calculate the Chisquare value for the association between myocardial infraction and diabetics.

Miocardial infraction	No myocardial infraction	
	Diabetic	No Diabetic
Diabetic	9	37
No Diabetic	25	119

- 11 a) Draw a block diagram of a computer and discuss about each part of the computer.  
**OR**

- b) Discuss the following features of Windows Operating system.  
 i) Desktop and icons ii) Windows explorer iii) Recycle bin

- 12 a) Discuss the following features of MS WORD.  
 i) Creation of Table ii) Formating iii) Mail Merge  
**OR**

- b) What do you understand about electronic spread sheet? Discuss about the important features of MS EXCEL.

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