**Code No. 1552**

**FACULTY OF SCIENCE**

**B.Sc. I – Year Examination, March / April 2014**

**Subject : Bio-Technology (General)**

**Paper – I: Cell Biology and Genetics**

**Time : 3 hours Max. Marks : 100**

***Note : Answer all questions. All questions carry equal marks.***

1 a) What are the different stages of Meiosis? Discuss in detail.

**OR**

b) Give the ultrastructure of prokaryotic cell. How is it different from the

 eukaryotic cell.

2 a) Define epistasis. Explain in detail any two deviations from Mendel’s laws

 with suitable examples.

**OR**

 b) Explain the sex determining mechanism in Mammals and Drosophila.

3 a) Give the various models proposed for DNA replication.

**OR**

 b) Explain DNA damage and repair.

4 a) Write in detail about analysis of variance.

**OR**

 b) Explain simple correlation and regression.

5) Write short notes on any **three** of the following :

a) Mitochondria

b) Incomplete dominance

c) Griffith’s experiment

d) Protein database

e) X-linked inheritance

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