

**T.Y.B.SC. SEM – VI (2014 COURSE) : WINTER - 2017**  
**SUBJECT – MICROBIOLOGY: GENETICS OF EUKARYOTES & GENE**  
**MANIPULATION**

Day: Wednesday  
Date: 01/11/2017

**W-2017-0691**

Time: 12.00 NOON TO 02.00 PM  
Max. Marks: 40

**N.B.:**

- 1) All the questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw diagrams **WHEREVER** necessary.

**Q.1** Answer **ANY TWO** of the following: **[10]**

- a) Explain life cycle of *Neurospora crassa*.
- b) Describe colicinogenic plasmids in detail.
- c) Describe various processes of joining DNA in genetic engineering.

**Q.2** Answer **ANY TWO** of the following: **[10]**

- a) Explain the behaviour of killer trait in *Paramoecium aurelia*?
- b) Give the applications of genetic engineering in the field of medicine?
- c) Explain with the help of a suitable diagram the two strand double cross over in *Neurospora crassa*.

**Q.3** Answer **ANY TWO** of the following: **[10]**

- a) Explain genomic library and compare it with cDNA library.
- b) Explain the properties of bacterial plasmids.
- c) Enlist different DNA sequencing techniques and explain any one of them.

**Q.4** Define/Explain/Write in short on **ANY FIVE** of the following: **[10]**

- a) Poky Mutants
- b) Tetrad analysis
- c) Restriction enzymes
- d) Transgenic plants
- e) Cosmid vectors
- f) Broad host range plasmids.
- g) Linkers and adaptors

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