

**2017**

**(January)**

Full Marks : 40

Time : 2 hours

*All Question carry equal marks.*

*Answer **all** questions*

**( Microbiology and Immunology )**

1. Explain the various methods of reproduction found in bacteria. (14)

**OR**

Write short notes on the following : (7x2=14)

- (a) Mycoplasma
- (b) Use of Cyanobacteria in industry and agriculture

2. Write details on virus as a tool for genetic engineering. (13)

**OR**

Write short notes on the following : (6½x2=13)

- (a) Transduction
- (b) Viral vectors

3. What is antibody ? Explain the basic structure of antibody molecules with labeled diagram. (13)

**OR**

Write short notes on the following : (6½x2=13)

- (a) B-lymphocytes
  - (b) Human Immune deficiency diseases.
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