

**S. Y. B. Sc. (Biotechnology) SEM – III (2010 COURSE) : WINTER -  
2018**

**SUBJECT: MICROBIOLOGY – II**

Day: Wednesday  
Date: 24/10/2018

**W-2018-1191**

Time: 02.00 PM TO 05.00 PM  
Max Marks. 80

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION - I**

- Q.1** A) Answer **ANY ONE** of the following (06)
- i) Discuss lysogenic cycle in bacteriophages.
  - ii) Explain generalized transduction in brief.
- B) Answer **ANY TWO** of the following (10)
- i) What are plasmids? Explain various types of plasmids.
  - ii) How viruses are cultivated using cell culture method?
  - iii) Discuss Bernard Davis U tube experiment that proves cell to cell contact is essential for conjugation.
- Q.2** Write short notes on **ANY FOUR** (16)
- i)  $F^+ \times F^-$  mating
  - ii) Helical capsid
  - iii) Detection of viral growth in cell culture
  - iv) One step growth experiment
  - v) General features of virus.

**SECTION - II**

- Q.3** A) Answer **ANY ONE** of the following (06)
- i) Discuss the pathogenesis of typhoid fever.
  - ii) What are lichens? Give its applications.
- B) Answer **ANY TWO** of the following (10)
- i) What are extremophiles? Give its applications.
  - ii) What are the various stages of AIDS?
  - iii) Give significance of probiotics in human health.
- Q.4** Write short notes on **ANY FOUR** (16)
- i) Draw the structure of influenza virus.
  - ii) What are thermophiles? Give its significance.
  - iii) Discuss interaction of plant microbes with reference to root nodules.
  - iv) Define the terms:
    - i) Opportunistic pathogen
    - ii) Virulence
    - iii) Invasiveness
    - iv) Infectivity
  - v) What is host parasite relationship?
- Q.5** Write short notes on **ANY FOUR** (16)
- i) HBsAg
  - ii) Pneumonia
  - iii) PCR polymerases
  - iv) Rumen
  - v) Preventive measures for typhoid