



**DMM-3091**  
**B. Sc. (Sem. IV) Examination**  
**April / May - 2016**  
**Bioscience**  
**(403 - Elementary Microbiology)**

Time : 2 Hours]

[Total Marks : 50

**Instructions :**

(1)

<p>नीचे दशांशवैल निशानीवाणी विगतो उत्तरवडी पर अवश्य क्षभवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : B. Sc. (SEM. 4)</p> <p>Name of the Subject : BIOSCIENCE</p> <p>Subject Code No. : 3 0 9 1 Section No. (1, 2.....): Nil</p>	<p>Seat No. : □ □ □ □ □ □</p> <p style="text-align: center;">Student's Signature</p>
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- (2) Draw neat and labeled diagrams wherever necessary.  
(3) Figures to the right indicate full marks of the question.

- 1 Answer as directed : 12
- (1) Define: Phototroph and Chemotroph.
  - (2) What are obligate anaerobes? Give examples.
  - (3) What is cell wall free state?
  - (4) Name two endospore forming bacteria.
  - (5) Define toxigenicity and opportunistic pathogen.
  - (6) Name two normal flora of nasal cavity.

- 2 Describe in detail four phases of bacterial growth. 14

**OR**

- 2 Discuss different cell inclusions in bacterial cell. 14

- 3 Discuss any **two** of the following : 14

- (1) Describe in brief nutritional requirements of the bacteria.
- (2) Explain the techniques used for the measurement of cell mass.
- (3) Explain types of pathological conditions.
- (4) Write a note on structure of bacterial flagella.

4 Write short notes on any **two** of the following : **10**

(1) The mathematics of growth.

(2) Exotoxins.

(3) Infection.

(4) Intestinal Flora.

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