

B.Sc. Semester - 1 (CBCS) Examination
Nov./Dec. -2018 (New Course)
MICRO-BIOLOGY (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Ques.1 A. Answer the following (One mark each) (4)

- 1) What are Premonera ?
- 2) Define : Firmicutes
- 3) What are Actinomycetes ?
- 4) What is periplasmic space ?

Ques.1 B. Answer in brief (Any one out of two) (3)

- 1) Explain the kingdom Protista
- 2) Write Koch's postulates

Ques.1 C. Answer in detail (Any one out of two) (7)

- 1) Describe groups of microorganisms in detail.
- 2) Explain Spontaneous generation V/S biogenesis.

Ques.2 A. Answer the following (One mark each) (4)

- 1) Define : Differential staining
- 2) What is the contribution of Knoll and Ruska ?
- 3) What is a fixative ?
- 4) Give examples of fluorescent dyes.

Ques.2 B. Answer in brief (Any one out of two) (3)

- 1) What is resolution power of a microscope ?
- 2) Explain the difference between SEM and TEM

Ques.2 c. Answer in detail (Any one out of two) (7)

- 1) Phase contrast microscopy
- 2) Discuss the chemical types of stains used in microbiology laboratory

Ques.3 A. Answer the following (One mark each) (4)

- 1) What is Amphitrichous flagella ?
- 2) What are the components of murein ?
- 3) What are pleomorphic cells ?
- 4) Write the types of granules found in a bacterial cell

Ques.3 B. Answer in brief (Any one out of two) (3)

- 1) Give an overview of process of sporulation.
- 2) Draw a labelled diagram of Fluid Mosaic Structure

- Ques.3C. Answer in detail (Any one out of two) (7)
- 1) Describe the biochemical structure of peptidoglycan cell wall.
 - 2) Explain bacterial flagella with diagram.
- Ques.4 A. Answer the following (One mark each) (4)
- 1) Define: Chemotroph
 - 2) What are Mesophiles ?
 - 3) Write major colony characteristics
 - 4) What is the composition of n-agar medium ?
- Ques.4 B. Answer in detail (Any one out of two) (3)
- 1) Explain differential media with example.
 - 2) Explain physical requirements for growth.
- Ques.4 C. Write a note on (Any one out of two) (7)
- 1) Explain bacteriological media
 - 2) Nutritional types of bacteria.
- Ques.5 A. Answer the following (One mark each) (4)
- 1) Define : Generation time
 - 2) What is budding ?
 - 3) What is lag phase ?
 - 4) What is a continuous culture ?
- Ques.5 B. Answer in detail (Any one out of two) (3)
- 1) Explain synchronous culture in brief
 - 2) Describe septum formation process
- Ques.5 C Write a note on (Any one out of two) (7)
- 1) Describe modes of bacterial cell division
 - 2) Write an essay on bacterial growth curve
