



**UNIVERSITY OF NORTH BENGAL**  
B.Sc. Honours 1st Semester Examination, 2020

**CC2-MICROBIOLOGY**

Full Marks: 40

**ASSIGNMENT**

*The questions are of equal value.  
The figures in the margin indicate full marks.*

**Answer any four questions from the following** 10×4 = 40

1. Discuss in details the structure, formation and various stages involved in sporulation of an endospore forming bacteria. 10
2. Describe with the help of ray diagram the working principle and application of a phase contrast microscope. 10
3. Mention the important diagnostic properties of *Bacillus* and *Frankia*. 5+5
4. Compare and contrast between prokaryotic and eukaryotic microorganisms emphasizing on their mode of energy utilization and chromosomal organization. 5+5
5. Two bacteria A and B were inoculated in separate flasks having isotonic, hypotonic and hypertonic environment. After few hours of incubation of 37°C it was observed that A exhibited turbid growth only in isotonic environment whereas bacterium B exhibited growth in all flasks your answer emphasizing on the role of osmotic pressure in the survival of two bacteria A and B respectively. 10
6. Discuss about numerical taxonomy in details. 10

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