

S.E. (Biotech) (Rev) Sem - 3
 GBGS
 28/5/14

Microbiology
 microbiology

QP Code : NP-18699

(3 Hours)

22

[Total Marks : 80

- N. B. : (1) Question No. 1 is compulsory
 (2) Attempt any three questions out of remaining five questions.
 (3) Draw suitable diagrams wherever necessary.

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| 1. Write short note on the following: | 20 |
| (i) Whittaker's five kingdom classification | |
| (ii) Bacterial chemotaxis | |
| (iii) Broad spectrum antibiotics | |
| (iv) Differential Media | |
| 2. (a) Explain nutritional requirements of microorganisms. | 10 |
| (b) Explain growth curve of bacteria. | 10 |
| 3. (a) Explain the difference between batch & continuous culture. | 10 |
| (b) What are antibiotics. Explain the mechanism of their action. | 10 |
| 4. (a) What is sterilization? Explain physical methods of sterilization. | 10 |
| (b) Explain streak plate method for isolation of pure culture. | 10 |
| 5. (a) What are bacterial toxins. Explain with examples. | 10 |
| (b) Give a detail about microbial community in soil. | 10 |
| 6. (a) Explain with flowsheet nitrogen cycle. | 10 |
| (b) Draw a neat labelled diagram of bacterial cell. Explain role of flagella & pili. | 10 |

Con. 11701-14.