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**BG—13—2016**

**FACULTY OF SCIENCE**

**B.Sc. (Second Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(Revised Course)**

**BIOTECHNOLOGY**

**Paper (BTT-2.2)**

**(Microbiology)**

**(Tuesday, 22-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—3 Hours*

*Maximum Marks—80*

*N.B. :— (i) Attempt All questions.*

*(ii) Draw well labelled diagrams wherever necessary.*

1. (a) Describe in detail controversy over spontaneous generation. 10
- (b) Describe structure and chemical composition of bacterial cell wall. 10
2. (a) Describe structure of bacterial cell membrane. 8
- (b) Describe structure and function of nucleoid. 7

*Or*

- (a) Describe structure and germination of endospore. 8
- (b) Describe structure of bacterial flagella. 7
3. (a) Describe bacterial growth curve. 8
- (b) Describe continuous culture with its significance. 7

*Or*

- (a) Explain major and minor elements required for bacterial growth. 8
- (b) Describe methods for enumeration of bacterial growth. 7
4. (a) Describe moist heat and dry heat sterilization. 8
- (b) Explain sterilization by radiation. 7

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Or

- (a) Describe chemotherapeutic agents. 8
- (b) Define disinfection. Write a note on alcohol and phenol as disinfectant. 7
5. Write notes on (any *three*) : 15
- (i) Koch's postulates
- (ii) Geomicrobiology
- (iii) Gas vesicles
- (iv) Diauxic growth
- (v) Pasteurization.