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(20517) Roll No. ....

B.Sc. (Bio-Tech.)-I Year

NS-3458

B.Sc.(Bio-Tech.) Examination, May 2017

MICROBIOLOGY

(B-104)

(New)

Time : Three Hours ] [Maximum Marks : 50

Note : Attempt any five questions. All questions carry equal marks.

- 1. What is sterilization? Discuss about various chemicals used for sterilization. 10
- 2. Define antibiotic. Discuss the production process of penicillin giving a flow chart. 10
- 3. Write an explanatory note on : 5 each
  - (i) Steps of Pasteur's experiment.

P.T.O.

(ii) T<sub>2</sub> bacteriophage & its multiplication.

- 4. What is nitrogen fixation? Discuss the process of biological nitrogen fixation giving different nitrogen fixing micro-organisms. 10
- 5. Write short notes on : 2½ each
  - (a) Autoclave
  - (b) Bacteria as a source of Biopesticides
  - (c) Viral diseases in human beings
  - (d) Serotypes
- 6. What is electron microscopy? How SEM forms the image of an object? Explain in detail. 10
- 7. Write in detail on : 5 each
  - (i) Pasteurization
  - (ii) Isolation of auxotrophs
- 8. What do you mean by Single Cell Protein (SCP)? Discuss its production process. 10

NS-3458\2



9. Write short note on the following :

2½ each

- (i) PPLO
- (ii) Dry heat sterilization
- (iii) Symbiosis and antibiosis
- (iv) Ionizing radiation sterilization

10. Write an essay on industrial uses of microbes  
for the production of dairy products. 10