

Seat No. : _____

LE-108

April-2014

B.Sc. (Sem.-VI)

CC-308 : Biochemistry
(Advance Microbiology)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (1) All questions carry equal marks.
(2) Mention clearly the option you attempt.
(3) Draw diagrams wherever necessary.

1. (a) Explain the mode of action, uses and limitations of the following as sterilizing agents : **12**
(i) Radiations
(ii) Chlorine
(iii) Mercury
(b) Define : (1) Microbiostasis (2) Antiseptic **2**
- OR**
- (a) Write a note on Phenol coefficient. **5**
(b) Discuss types of special media. **7**
(c) Define : (1) Photoautotroph (2) Chemolithotroph **2**
2. (a) Explain Bacterial growth curve in detail. **10**
(b) Define pure culture and discuss any one method to isolate a pure culture. **4**
- OR**
- (a) Discuss the role of Temperature & Oxygen on bacterial growth. Define the types based on these two factors. **8**
(b) Discuss cultivation of Anaerobes. **6**
3. (a) Discuss in detail the transmission, pathogenesis, symptoms, diagnostic tests and prevention of AIDS. **14**
- OR**
- (a) Write a note on: (1) Drug Resistance (2) Chemotherapeutic Index **8**
(b) Discuss mode of action, uses and limitations of Penicillin. **6**

4. (a) Explain the design of a Bioreactor with a labelled diagram and give its function. **8**
(b) Discuss the industrial production of Beer. **6**

OR

- (a) Discuss the industrial production of : (1) Lysine (2) Vinegar **10**
(b) Write a brief note on Packed bed Reactor. **4**
5. Answer briefly **all** questions : **14**
- (1) Define Empirical Media & give an example. **2**
(2) Is Pasteurization complete sterilization ? Justify. **2**
(3) Give any two uses of microbicidal gases as sterlising/disinfecting agents. **2**
(4) Define Generation Time. **1**
(5) Define Halophilic bacteria and Barophilic bacteria. **2**
(6) What is difference between an Antibiotic and a Drug ? **1**
(7) What is the difference between Continuous & Fed batch culture ? **1**
(8) Give two additional or other uses of Antibiotics. **2**
(9) What is Lyophilisation ? **1**
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