

B.Sc Semester-6 Examination

CC 308

Biochemistry

April-2024

Time : 2-30 Hours]

[Max. Marks : 70

Instructions:

- Attempt ALL questions
- All questions in carry equal marks.
- Question 5 is compulsory
- Draw diagrams wherever necessary

Time: 2. 30 hrs.

Total Marks: 70

- Q1. (A) Write a note on Nutritional categories of bacteria with examples. (06)
 (B) Discuss the principle, mode of action, working and uses of Autoclave in sterilization. (08)

OR

- Q1. (A) Discuss different types of bacteriological medias with examples. (10)
 (B) Explain briefly: 1. Phenol coefficient 2. Oligodynamic action of heavy metals. (04)

- Q2. (A) Discuss in detail with a diagram bacterial growth curve in a batch culture. (08)
 Name the growth phases:
 1. where mutants are formed
 2. where secondary metabolites are produced by the organisms
 (B) Define Anaerobes. Explain different methods of cultivation of Anaerobes. (06)

OR

- Q2. (A) Explain the effect of temperature and pH on the growth of bacteria & the classification of microorganisms based on it. (07)
 (B) Define pure culture. Discuss methods of preservation of pure culture. (07)

- Q3. (A) Discuss in detail the causative agent, transmission, pathogenesis, symptoms, and treatment of typhoid. (10)
 (B) Discuss the causative agent, mode of transmission and vaccine for Tuberculosis. (04)

OR

- Q3. (A) Write a note on Source, mode of action, uses and limitations of:
 1. Penicillin 2. Sulpha drugs (08)
 (B) List the ideal properties of a Chemotherapeutic agent (06)

- Q4. (A) Discuss the industrial production of: Beer (08)
 (B) Define Batch, Fed batch and Continuous fermentation (06)

OR

- Q4. (A) Explain the design of a Bioreactor with a labeled diagram. List the functions of the parts of a Bioreactor. (07)
 (B) Discuss the industrial transformation of Steroids using microorganisms. (07)

- Q5. **Attempt any SEVEN Questions** (14)
 1. List any two uses of microbicidal gases.
 2. Define media. Give one example liquid media and its use.
 3. What is the difference between Antiseptic and disinfectant. Give example.
 4. Define cardinal points.
 5. Define microaerophilic organism. Give example.
 6. Define barophilic organisms. Where are they found?
 7. Define chemotherapeutic Index and its significance.

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8. Give any two uses of antibiotics other than treatment of diseases.
9. What is drug resistance?
10. Name the solvent and pH used for penicillin production / extraction
11. What are the two routes of lysine production?
12. Name the organisms used in Vinegar production. Give one property of the strain required in vinegar production.

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