

Seat No. : _____

AD-125

April-2023

B.Sc., Sem.- VI

CC-309 : Biotechnology (Microbial Biotechnology)

Time : 2:30 Hours]

[Max. Marks : 70

1. Discuss various raw materials used to formulate fermentative medium. 14

OR

(A) Write a note on inoculum development of brewer's yeast. 7

(B) Enlist criteria for the selection of industrially important organisms. 7

2. Discuss medium, fermentative process and Recovery of *Rhizobium* inoculants. 14

OR

(A) Explain the media used for *B. thuringiensis* production and give its mode of action. 7

(B) Write a detail note on fermentative production of SCP with its application. 7

3. Explain overproduction of amino acids using auxotrophic mutants. 14

OR

(A) Describe about the commercial production and application of Vitamin C. 7

(B) Write a detail note on two stage process of alcohol production. 7

4. How strain improvement helps in overproduction of antibiotics. 14

OR

(A) Note on Polyketide biosynthetic pathway. 7

(B) Enlist the applications and production mechanism of Xanthan gum. 7

5. Short questions : (Any Seven)

14

- (1) Define Microbial growth kinetics.
 - (2) Which phase of bacteria produces secondary metabolite ?
 - (3) What is Del factor and state its significance.
 - (4) State an advantage of using spore inoculum over mycelial in fermentation practice.
 - (5) What plants are affected by Ergot ?
 - (6) Define Pharmamedia.
 - (7) Name few agriculture waste used as raw materials for fermentation.
 - (8) Write mode of action of Amphotericin B.
 - (9) Define Screening with an example.
 - (10) Enlist four suitable features of antifoaming agents.
 - (11) Write composition of WSL.
 - (12) Why media formulation is needed ?
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