



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – July 2020
IV Semester

Class : II UG

Major : Biochemistry and Biotechnology

Time : 3 Hours

Max Marks : 100

18BBTC09 Microbial Biotechnology

PART A

10 x 1 = 10

Choose the Correct Answer

- Auxotrophic mutants are commonly used for
 - Food
 - Vaccines
 - Agriculture
 - Brewing
- Batch systems is also called as _____ system of fermentation.
 - closed
 - open
 - radial
 - systemic
- Semi batch culture is also called _____ system
 - Fed batch
 - Anti culture
 - Repetitive
 - conventiona
- Gas liquid reaction is found in _____ fermenter.
 - Fed batch
 - Batch
 - air lift
 - bubble column
- _____ is responsible for alcoholic fermentation.
 - Yeast
 - Zea mayes
 - Candida
 - Rhizopus
- Credit of Lactic acid fermentation goes to
 - Louis Pasteur
 - Robert Koch
 - Watson James
 - Edward Jenner
- _____ phase is also called as exponential growth phase of microbes
 - Lag
 - Log
 - death
 - stationary
- Generation time is known as _____ time
 - Doubling
 - critical
 - weaning
 - recovery
- Resting cells are called as
 - Endospores
 - rhizome
 - rigor
 - pilus
- _____ catalyses hydrolysis of starch into sugars
 - Catalase
 - amylse
 - oxidase
 - reductase

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11. a. Give a note on replica plating.
(or)
11. b. Sketch the design of a fermenter.
12. a. What is the difference between fed batch and batch fermentation?
(or)
12. b. Speculate on media formulation for microbes.
13. a. Describe the factors influencing microbial growth in food.
(or)
13. b. Outline the Basic principles of food fermentation.
14. a. Explain about the production of wine.
(or)
14. b. Explain about the production amylase from microorganism.
15. a. Discuss about the primary & secondary metabolites.
(or)
15. b. Assess the steps in Baker's yeast production.

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16. a. Discuss at length the various methods of strain improvement.
(or)
16. b. Report the significance of auxotrophic mutants.
17. a. Interpret the importance of media sterilization.
(or)
17. b. Give an account on fluidized bed reactor.
18. a. Express the functions of temperature in microbial growth.
(or)
18. b. Discuss the role of fermentation in food industry.
19. a. Point out the steps in penicillin production.
(or)
19. b. Describe the production of polysaccharide.
20. a. Discuss about the mushroom cultivation.
(or)
20. b. Summarize the basic steps involved in SCP production.
