

Q.II Do as directed

[08]

- a) The major component of bacterial cell wall is _____.
- b) Corn steep liquor in media is source of _____.
- c) _____ is the by-product of cheese.
- d) _____ mushroom is the common name of *Volvariella volvacea* species
- e) Bleach is an example of halogen group of chemicals used for disinfection.
(True/False)
- f) The prototrophs are the organisms which are not capable of synthesizing all growth requirements for themselves. (True/False)
- g) During batch culture/fermentation, nutrients in the fermenter are utilized at a fast rate. (True/False)
- h) Cyanobacteria are photosynthetic. (True/False)

Q.III Answer the following questions in short. (Attempt any 10)

[20]

- a) Write the different characteristics of viruses.
- b) Differentiate between viruses and bacteria.
- c) How osmotic pressure is used for microbial control?
- d) Define synthetic media.
- e) What is auxotrophic mutant?
- f) Define - Enrichment culture technique.
- g) What is idiophase?
- h) Give the applications of protease.
- i) Write a brief note on yogurt as fermented food.
- j) What is SCP?
- k) Define Bioinsecticide.
- l) List out different types of bioplastics.

Q.IV Answer the following question in detail. (Attempt any four)

[32]

- a) Discuss the various types of bacteria on the basis of their shape and flagella.
- b) Explain in detail microbial physical control agents.
- c) Give an account on crowded plate technique for microbial isolation.
- d) Explain in detail Strain improvement.
- e) Give a detailed note on cheese production.
- f) Discuss in detail production of amylase from microorganisms with its applications.
- g) Give an account on mushroom cultivation.
- h) Write a short note on fungi as biofertilizers.

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