

2022

**BOTANY — HONOURS**

**Paper : SEC-A-1**

**(Applied Phycology, Mycology and Microbiology)**

**Full Marks : 80**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer the following questions : 2×10
- (a) Name two algal genera used as source of bioplastic.
  - (b) What is SCP? Name one microalga used as a source of SCP.
  - (c) What is Carrageenan? Mention its one use.
  - (d) Name two algae producing toxin.
  - (e) Name the fungal source and use of Riboflavin.
  - (f) Write the fungal source and use of Cellulase.
  - (g) Name two fungal species used as biocontrol agent.
  - (h) Distinguish between batch fermentation and continuous fermentation.
  - (i) Write one microbial source and one use of glutamic acid.
  - (j) What is Koji rice?
2. Answer **any four** questions of the following : 5×4
- (a) What is diatomite? State its uses.
  - (b) Give a flow chart on the production of biodiesel.
  - (c) Give a flow chart of Camembert Cheese production.
  - (d) Write a brief note on use of microbes as Biopesticides.
  - (e) Briefly discuss on fungi as food.
  - (f) Give an outline of industrial production of vinegar.
3. Answer **any four** questions of the following :
- (a) Write the source organism and uses of the following : 2½×4  
Agar-agar, Algin, Lysine, Cyclosporin-A
  - (b) Write an account of algae as food. 10

**Please Turn Over**

X(3rd Sm.)-Botany-III/SEC-A-1/CBCS

(2)

- (c) (i) Mention the role of VAM as biofertilizer.
  - (ii) Give an outline of product recovery phase in Streptomycin production. Name two bacteria used in mineral processing. 4+(4+2)
  - (d) (i) Discuss on the industrial production of ethanol.
  - (ii) Write the fungal source and uses of the following : 5+(2½+2½)  
Tryptophan, Griseofulvin.
  - (e) (i) Give an example of antifungal antibiotic and mention its importance.
  - (ii) Name two algal genera used as N<sub>2</sub> fixing biofertilizer. Discuss the role of *Rhizobium* as biofertilizer. 3+(2+5)
  - (f) What is Aflatoxin? Mention two potential sources of it. Classify it and mention the physio-chemical properties of it. Point out its health consequences. 2+2+(1+2)+3
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