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

(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_2 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
