

2403000503046001
EXAMINATION NOVEMBER 2024
BACHELOR OF SCIENCE (NEP) (THIRD SEMESTER)
MDC-MARINE MICROBIOLOGY - LEVEL 4

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination: **BACHELOR OF SCIENCE (NEP) (THIRD SEMESTER)**
 - b. Name of the Subject: **MDC-MARINE MICROBIOLOGY - LEVEL 4**
 - c. Subject Code No: **2403000503046001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Give specific answers: (Any ten)

10

- a. What do you mean by bio-fouling?
- b. Enlist any two causative factors affecting marine pollution.
- c. Which organisms are involved in bioaccumulation of heavy metals like mercury in the marine food chain?
- d. What measures are used to preserve seafood that are exported?
- e. Which pigments are present in red algae?
- f. Give example of an antimicrobial compound produced by *Alteromonas*.
- g. Write the name of a bacterial pathogen associated with disease in marine animals.
- h. Write viruses are sensitive to sulfated polysaccharides?
- i. What do you mean by mesopelagic zone?
- j. Name the organism producing benzanthraquinone antibiotic.
- k. Which brown algae is used for making Japanese product Shoyu?
- l. Tetrodotoxin (TTX) is isolated from which marine organism?

Q.2 Answer any two of the following:

10

- a. Comment- "There are eight basic kinds of habits for marine microorganisms"
- b. Explain in brief Green algae.
- c. Short note on distribution of marine microorganisms.

Q.3 Discuss any two of the following: 10

- a. Write a detailed note on Spoilage of seafood.
- b. Explain the role of marine microorganisms in production of biopolymers and enzymes.
- c. Give a short note on fish diseases associated with bacterial pathogens.

Q.4 Answer any two of the following: 10

- a. Write a short note on Biofouling.
- b. Discuss in brief the causes and control measures of marine pollution due to oil.
- c. Comment- “Marine Microorganisms have an ability to degrade complex molecules including naphthalene, pesticides and petroleum”.

Q.5 Explain any two of the following: 10

- a. Write a detailed note on toxins produced by marine microorganisms.
- b. Explain in brief about antibacterial agents obtained from marine algae and fungi.
- c. Enlist the various marine microorganisms along with anti-viral and anti-tumor compounds produced by them.
