

(6 pages)

Reg. No.:.....

Code No. : 10741 E Sub. Code : JMMI 6 A

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2020.

Sixth Semester

Microbiology — Main

Major Elective—II – MARINE MICROBIOLOGY

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1. Which is the region that is above water level at low tide and under water at high tide
 - (a) Splash zone
 - (b) Continental shelf
 - (c) Intertidal zone
 - (d) Benthic region

2. Free swimming organism that can move throughout the water column are called
 - (a) Benthos
 - (b) Nektons
 - (c) Plank tons
 - (d) Algae

3. Which are the common most vegetation found in the salt water and water-logged environment
 - (a) Shrubs
 - (b) Trees
 - (c) Mangroves
 - (d) Bushes

4. Which region is dominated by water-tolerant woody vegetation
 - (a) Mangroves
 - (b) Salt marshes
 - (c) Swamps
 - (d) None of these

5. Which device is used to pick a single bacterial cell from a mixed culture?
 - (a) Microscope
 - (b) Micropipette
 - (c) Microprobe
 - (d) Micromanipulator

6. High atmospheric pressure tolerating microorganism is called an
 - (a) Xerophilic
 - (b) Barophilic
 - (c) Thermophilic
 - (d) Merophilic

7. Which of the following atom most often limits the primary productivity?
- (a) Sulphur (b) Phosphorus
- (c) Carbon (d) Nitrogen
8. Which one is the highest trophical level organism is grassland food web ?
- (a) Grass (b) Lizard
- (c) Grasshopper (d) Hawk
9. The improvement in diet digestibility of fish juveniles using which probiotic organism?
- (a) Lactobacillus Acidiophiles
- (b) Lactobacillus Dulberukii
- (c) Lactococcus sp.
- (d) Bacillus sp.
10. Which compound acts as antifouling compounds
- (a) Antibiotics (b) Biodispersants
- (c) Oil (d) None of these

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Briefly discuss on the marine archaeobacterial groups.

Or

- (b) Write note on Nutrient up welling and down welling.

12. (a) Write note on ecosystem of salt marshes.

Or

- (b) Briefly explain the ecosystem of swamps.

13. (a) How will you enumerate the marine bacteria from samples?

Or

- (b) Write note on temperature and water activity affect the microbial growth and activity.

14. (a) Briefly explain the path of food web.

Or

- (b) Write note on water cycle.

15. (a) Discuss about fish spoilage in seafood microbiology.

Or

- (b) Briefly explain the shell fish poisoning.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 600 words.

16. (a) Write note on the classification of marine organisms.

Or

- (b) Give an account of marine ecosystem.

17. (a) Briefly explain the microbial degradation of natural and synthetic waste materials.

Or

- (b) Write note on the ecosystem of estuaries and deep sea.

18. (a) How will you identify the marine bacteria based on the morphological, physiological and biochemical characteristics?

Or

- (b) Write notes on pressure, salinity and oxidation reduction potential influence the growth of microorganism and its activities.

19. (a) Briefly explain the decomposition of organic matters.

Or

- (b) Write short notes on probiotic bacteria? How does its importance in fish culturing.

20. (a) What is bio active compound? What are the bio active compounds isolated from sea?

Or

- (b) Write note on human pathogens and contaminants present in the sea foods? Discuss it.
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