

Reg.No.:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 9026

M.E. / M.Tech. DEGREE END-SEMESTER EXAMINATIONS – JUNE / JULY 2024

Second Semester

Biotechnology

P23BTE15 – MARINE BIOTECHNOLOGY

(Regulation 2023)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Interpret the hydrothermal vent.	2	K2	CO1
2.	Give an example of symbiosis in the marine.	2	K2	CO1
3.	What type of mussels are edible?	2	K2	CO1
4.	Mention the importance of probiotic bacteria in aquaculture.	2	K3	CO3
5.	What is marine fouling and how does it occur?	2	K3	CO3
6.	Write the causes for marine corrosion.	2	K3	CO3
7.	List any two medicinal compounds from marine biodiversity with anti-helminthic activities.	1+1	K2	CO4
8.	List any two medicinal compounds from marine biodiversity with anti-viral activities.	1+1	K2	CO4
9.	Interpret the marine food processing.	2	K2	CO5
10.	Elucidate the value addition in marine food products.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Write in detail about the role of symbiotic organisms in marine biodiversity.	13	K3	CO1
	(OR)			
b)	Write in detail about the extremozymes and their applications.	8+5	K2	CO1
12. a)	Write a note on recent advances and application of vaccines against fish pathogens in aquaculture.	7+6	K3	CO2
	(OR)			
b)	Write a detailed note on genetic engineering in marine aquaculture and its significance.	6+7	K3	CO2
13. a)	Write a note on biodegradation with special focus on plastic and oil degradation.	5+8	K3	CO3
	(OR)			
b)	What is biofilm and write in detail about the steps involved in formation of biofilm?	6+7	K3	CO3
14. a)	Discuss in detail the pharmacological activities of various medicinal compounds from marine fauna.	13	K4	CO4
	(OR)			
b)	Discuss in detail about the medicinal compounds isolated from marine flora and their importance.	13	K4	CO4
15. a)	Discuss in detail about the marine food preservation and storage methods.	7+6	K4	CO5
	(OR)			
b)	Discuss on the FSSAI and ISO standards for marine food safety and quality control.	6+7	K4	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	Write a detailed note on creation of value added products from marine products found in India.	15	K4	CO1
	(OR)			
b)	Write a detailed note on marine environmental pollution and the countermeasure to help preventing / decreasing the same.	7+8	K3	CO3