Reg. No. : | | | | | | | | | | | | |

Question Paper Code: UD506

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Professional Elective

Biotechnology

21BTV506- BIOFERTILIZER PRODUCTION AND MUSHROOM CULTIVATION
(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1.	Mention the significance of micro organisms in soil.	CO1- U
2.	Highlight the significance of symbiotic bacteria in plant growth.	CO1- U
3.	Define acidolysis.	CO1- U
4.	Highlight the significance of Nitrogen fixation.	CO1- U
5.	Can a cow-dung be used for preparing the bio-compost? Justify your answer.	CO2- App
6.	"The amount of cholesterol present in mushroom is high which makes it non-edible". Is the statement true? Justify your answer.	CO2- App
7.	Expand PDA and mention its significance.	CO1- U
8.	Define a growth media.	CO1- U
9.	Identify the ways in which bacterial disease spread in mushroom.	CO1- U
10.	Enlist the methods of post harvesting processing of mushrooms.	CO1- U

PART – B (5 x 16= 80 Marks)

11.	(a)	Explain the methods which aid in applying biofertilizer to a crop and the factors that affect the efficiency of biofertilizers.	CO1- U	(16)
		Or		
	(b)	Predict the properties of a good carrier and explain the various methods for production of bio fertilizers using carriers.	CO1- U	(16)
12.	(a)	Illustrate r-DNA technology and its role in improving the yield of a crop.	CO2- App	(16)

Or

	(b)	You are a senior researcher in XYX laboratory. You are in need to improve the strains of organisms that are incorporated in a bio fertilizer. Elaborate the strategies, considerations and steps for improving the same.	CO2- App	(16)
13.	(a)	Elucidate the preparation of mushroom compost and highlight its contribution towards environmental sustainability.	CO3- App	(16)
		Or		
	(b)	You are planning to utilize the wastes from mushroom cultivation farm in your college. Predict the challenges involved and explain the steps that you will follow to valorize the same.	CO3- App	(16)
14.	(a)	Explain in detail about the cultivation strategies of oyster mushrooms in a farm.	CO1 - U	(16)
		Or		
	(b)	Farmers can cultivate mushrooms what is your contribution as a biotechnologists in mushroom cultivation. Predict your role highlighting the economics of mushroom cultivation.	CO1 - U	(16)
15.	(a)	Oyster mushrooms are harvested in a hut. Mr "X" found that these mushrooms have bacterial and fungal infection. Predict the causes, mode of transmission and the effects of all bacterial and viral infection in mushroom.	CO5- Ana	(16)
		Or		
	(b)	X and Y are friends. X is scientist who works on Plant tissue culture and Y is a farmer who is interested in becoming an entrepreneur. Consider you as X and suggest an idea for Y regarding cultivating mushrooms predicting the economics and the profit that Y can obtain using the same.	CO5- Ana	(16)