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Question Paper Code:UC506

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Professional Elective

21BTV506 - BIO FERTILIZER PRODUCTION AND MUSHROOM CULTIVATION

Biotechnology

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define a biofertilizer. CO1 – U
2. Classify bacteria based on their nitrogen fixing ability and give an example for each. CO1 – U
3. Predict the scope of biofertilizers. CO2 - App
4. Is Health inspector and Fertilizer inspector same? Justify your answer. CO2 - App
5. Enlist 4 mushroom varieties. CO1 - U
6. Compare edible and poisonous mushroom. CO1 - U
7. Expand PDA and mention its significance. CO1 - U
8. Define a growth media. CO1 - U
9. Define Mummy disease. CO1 - U
10. Identify the cause of Inky cap disease in mushroom. CO1 - U

PART – B (5 x 16= 80 Marks)

11. (a) Stuart is planning to start a biofertilizer manufacturing company. You as his well-wisher suggest him the considerations, mass production and marketing the produced biofertilizer. 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) Explain the production of genetically engineered organisms for improvement of bio fertilizers. CO1-U (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. CO1-U (16)
13. (a) You are planning to set a mushroom cultivation farm in your college. Predict the challenges involved and explain the steps that you will follow to establish the same. CO2-App (16)
- Or
- (b) Outline the nutritional, medicinal values of mushrooms and its morphology. CO2-App (16)
14. (a) Explain in detail about *Lentinus sp.* cultivation and the strategies involved. CO1 -U (16)
- Or
- (b) Explain in detail about the cultivation of white button mushrooms in a farm. CO1 -U (16)
15. (a) 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. CO3 -App (16)
- Or
- (b) 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. CO3 -App (16)