B.Voc Even Semester Examination, 2025

FARM MACHINERY & POWER TECHNOLOGY

Course No.: BVA-501
(Tea and Plantation Processing Technology)

Full Marks: 70
Pass Marks: 28

Time: 3 hours

Note: 1. Attempt any one question from each unit.
2. Begin each answer in a new page
3. Answer parts of a question at a place
4. Assume reasonable data wherever required
5. The figures in the right margin indicate full marks for the question

UNIT-I

1. a) Describe the origin and history of tea cultivation. How has tea production evolved over the centuries? 7

   b) Explain the different types of tea (black, green, oolong, white, and pu-erh). How are they processed differently? 7

2. a) Discuss the ideal climatic and soil conditions required for tea cultivation. What regions of the world are best suited for growing tea? 7

   b) Describe the life cycle of a tea plant. What are the stages of growth from planting to harvesting? 7

b) Describe the packaging and storage requirements for tea. How do these practices ensure the preservation of tea quality and flavour? 7

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UNIT-II

3. a) Explain the role of genetics and plant breeding in improving tea plant varieties. What are some of the desirable traits in tea plants? 7

   b) Discuss the importance of pest and disease management in tea plantations. What are common pests and diseases that affect tea plants? 7

4. a) Explain the methods of propagation used in tea cultivation. How do they affect the quality and yield of tea? 7

   b) Analyze the impact of organic farming practices on tea cultivation. What are the benefits and challenges of organic tea farming? 7

UNIT-III

5. a) Describe the process of plucking tea leaves. How do the different plucking standards (fine plucking vs. coarse plucking) affect the quality of tea? 7

   b) Discuss the role of irrigation and water management in tea plantations. How do different irrigation methods impact tea production? 7

6. a) Explain the steps involved in the processing of black tea. How does each step contribute to the final flavour and quality of the tea? 7

   b) Discuss the differences in processing techniques for green tea compared to black tea. Why is it important to prevent oxidation in green tea processing? 7

UNIT-IV

7. a) Describe the process of withering and its significance in tea processing. What factors influence the duration and conditions of withering? 7

   b) Analyse the role of oxidation in tea processing. How does controlled oxidation affect the characteristics of black and oolong teas? 7

8. a) Explain the process of rolling in tea manufacturing. How does this step affect the appearance and flavor of the final tea product? 7

   b) Discuss the significance of drying in tea processing. What methods are used for drying tea leaves, and how do they affect the final product? 7

UNIT-V

9. a) Explain the concept of tea blending. What are the objectives of blending, and how is it done to achieve desired flavors and aromas? 7

   b) Analyze the impact of modern technology on tea processing. What advancements have been made in tea manufacturing equipment and techniques? 7

10. a) Discuss the importance of quality control in tea production. What are the key parameters monitored, and how are they tested? 7