Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14FP2026** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PLANTATION PRODUCTS AND SPICES TECHNOLOGY** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | A coffee planter has a surplus of green coffee beans after his primary R&G coffee manufacture. Break down the processing steps he would follow to convert this green coffee beans into soluble coffee. | CO1 | 15 |
| b. | A supermarket owner has the following tea in his stock. Earl Grey Oolong Tea, Giridar Cold soluble Tea, Lipton Mint Flavored Green Tea, Chamraj Decaffeinated Tea and Kannan Devan Black Tea Dust. Enable the owner to arrange the tea packets on the aisle of his supermarket based upon conventional and non-conventional tea classification. | CO2 | 5 |
| **(OR)** | | | | |
| 2. | a. | Discriminate between Green, Yellow, Red, Dark and white Tea. Emphasis should be on Plucking, Infusion Color, Specific Processing Steps involved, Market Need. | CO3 | 10 |
| b. | Break down the processing steps to convert plucked coffee cherry to parchment coffee and cherry coffee with required flowchart. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | A cocoa planter requires to dry his cocoa bean by harnessing the GHE mechanism. Explain how a Solar dryer working on GHE mechanism can be constructed and operated on his plantation. Sketch the GHE dryer and explain its working. | CO2 | 10 |
| b. | On a cocoa plantation in Papa Newguinea the weight of a batch of dried fermented Criollo beans is 250kg while its weight in unfermented state was approximately 600kg. Assess if the productivity of the plantation is in par with the cocoa beans generally grown in that location by calculating the recovery factor and comparing it with typical values of recovery factor. | CO3 | 5 |
| c. | Discuss the points that have to be kept in mind in the production of ground pepper. | CO3 | 5 |
| **(OR)** | | | | |
| 4. | a. | Distinguish between small and large cardamom. Breakdown the process of small Cardamom volatile oil production. | CO3 | 5 |
| b. | The average temperature during the growth and cultivation of cocoa pods in Equador was 320C. Predict the number of days it would take for the cocoa pods to reach maturity. | CO3 | 5 |
| c. | Evaluate the role of curing of green cardamom (small) in retaining its green colour to the maximum extent. Summarize the various methods through which this can be accomplished. | CO1 | 10 |
|  |  |  |  |  |
| 5. | a. | Paraphrase the processing steps involved in the manufacture of Fresh, Preserved and Dry Ginger. | CO1 | 10 |
| b. | Summarise the quality specification for turmeric (whole and ground). | CO2 | 10 |
| **(OR)** | | | | |
| 6. |  | Summarise the quality specification of cumin as whole seeds, Powdered seeds and paraphrase the production of cumin seeds and cumin oil. | CO1 | 20 |
|  |  |  |  |  |
| 7. | a. | Discuss the production of Cinnamon Quills. | CO2 | 10 |
| b. | Illustrate the process of garlic dehydration with a schematic representation and discuss the steps in detail. | CO2 | 10 |
| **(OR)** | | | | |
| 8. |  | Categorise dehydrated garlic and summarize the methods of dehydration and sensory evaluation of dehydrated garlic. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Summarise the production of dried clove bud, clove oil, ground clove and its oleoresin. | CO1 | 10 |
| b. | Discuss the manufacture of commercial vanilla and vanilla products. | CO1 | 10 |