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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14FP2026** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PLANTATION PRODUCTS & SPICES TECHNOLOGY** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Elaborate on the steps involved in the Instant tea production. | CO1 | 10 |
| b. | What is Decaffeination? Explain the steps involved in the process of decaffeination of coffee. | CO2 | 10 |
| (OR) | | | | |
| 2. | a. | What are the biochemical changes occur during withering of tea? | CO1 | 6 |
| b. | Elaborate on the steps involved in the Instant tea production. | CO1 | 8 |
| c. | Explain the Grades and their synonyms for Indian black tea. | CO3 | 6 |
|  |  |  |  |
| 3. | a. | Explain the process and equipments used during roasting of coffee in detail. | CO2 | 10 |
|  | b. | With a neat flow chart, describe the manufacture of green tea in detail. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | What is the significant of dutching in cocoa bean processing? | CO1 | 4 |
|  | b. | Illustrate the steps involved in cocoa bean processing with a neat flow diagram. | CO1 | 8 |
|  | c. | Describe the changes that takes place during fermentation of cocoa bean. | CO1 | 8 |
|  |  |  |  |  |
| 5. | a. | Illustrate the flavor synthesis during chocolate manufacture and mention the importance of quality and defects. | CO1 | 10 |
|  | b. | With a block diagram, describe the process and technology of chocolate production | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | How will you produce microencapsulated pepper? | CO3 | 4 |
|  | b. | With a neat sketch explain the drying process and working principle of dryers used in drying of cocoa. | CO1 | 8 |
|  | c. | Describe the significance of particle size distribution in chocolate manufacture. | CO1 | 8 |
|  |
| 7. | a. | Explain the quality issues of dehydrated garlic and its adulteration. | CO2 | 10 |
|  | b. | Explain the processing steps involved in primary and secondary products of ginger. | CO1 | 10 |
| (OR) | | | | |
| 8. | a. | Give a note on curing process of vanilla beans. | CO1 | 4 |
|  | b. | Describe the post harvest technology and quality specifications of ginger. | CO1 | 8 |
|  | c. | Explain the quality specifications and chemical composition of turmeric. | CO1 | 8 |
|  |  |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. | a. | Discuss in detail on the production process of quills, oil and oleoresin of cinnamon. | CO1 | 10 |
|  | b. | Elaborate on the steps involved in the garlic dehydration process with flowchart | CO2 | 10 |
|  |  |  |  |  |

ALL THE BEST