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 – April / May – 2017**

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

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

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Describe the wet & the dry method of manufacture of coffee with proper flow sheet. | CO1 | 10 |
| b. | Elaborate on the production of convenient products of coffee. | CO2 | 10 |
| (OR) | | | | |
| 2. | a. | Discuss the manufacture of black tea with special emphasis on withering and fermentation. | CO1 | 10 |
| b. | Explain the Japanese green tea manufacturing methods with neat flow chart. | CO1 | 10 |
| 3. | a. | How will you select suitable packaging material for tea? | CO2 | 4 |
|  | b. | Write a short note on harvesting, curing & fermentation of cocoa. Enumerate the quality requirements of a good cocoa. | CO2 | 8 |
|  | c. | Explain with neat sketch the working of GHE solar dryer and its application in the drying of cocoa. | CO2 | 8 |
| (OR) | | | | |
| 4. | a. | How will you estimate the maturity of cocoa bean? | CO1 | 4 |
|  | b. | With a block diagram, describe the process and technology of chocolate production. | CO1 | 8 |
|  | c. | Illustrate the flavor production during chocolate manufacture and mention the importance of quality and defects. | CO1 | 8 |
| 5. | a. | Illustarte the quality specifications of cumin seeds, powder and oil. | CO2 | 10 |
|  | b. | Describe the post harvest technology and quality specifications of ginger. | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | List out the functional properties of black and white pepper. | CO1 | 4 |
|  | b. | Illustrate the post production activities of vanilla pods. | CO1 | 8 |
|  | c. | Describe in detail on the production process of quills, oil and oleoresin of cinnamon. | CO1 | 8 |
| 7. | a. | Highlight the contaminants occur in coriander products. |  | 4 |
|  | b. | Elaborate on the post harvest processing and quality specifications of turmeric. | CO1 | 8 |
|  | c. | Describe the quality specifications and chemical constituents of black pepper. | CO1 | 8 |
| (OR) | | | | |
| 8. | a. | Explain in detail the method of manufacture of oleoresins and essential oils from pepper. | CO1 | 10 |
|  | b. | Describe the chemical composition and post harvest processing of fenugreek. | CO1 | 10 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Explain about turmeric boiling, drying and polishing operations. | CO2 | 10 |
|  | b. | Explain the post harvest technology involved in the manufacture of garlic. | CO2 | 10 |