

June 13, 2024 02:30 pm - 05:30 pm 1T00535 - T.E.(Chemical Engineering)(SEM-V)(Choice Base Credit Grading System) (R- 19) (C Scheme) / 31725 - Department Level Optional Course-I: Engineering Stream: Food Engineering QP CODE: 10057727

Time: 3 Hours

Total Marks: 80

N.B.:

1. Question No.1. Is compulsory.
2. Attempt any three questions out of remaining five questions.
3. Assume suitable data and justify the same.
4. Figures to the right indicate full marks

- Q 1 Answer any Four. **20**
- (a) Write in detail about TDT (Thermal Death Time) curve.
 - (b) How Heat Sterilization is carried out?
 - (c) How the Chilling of foods is carried out?
 - (d) Write a short note on primary process of various fruits processing are done?
 - (e) Write a short note on GMP (Good Manufacturing Practices)
 - (f) Explain in brief Bread manufacturing.
- Q 2 (a) What are the various products from fruit processing unit? Explain fruit juice processing in detail. **10**
- (b) Discuss the pasteurization process in detail. **05**
- (c) Discuss the freeze drying process in detail. **05**
- Q 3 (a) Write a brief note on types and importance of Vitamins, Minerals and Micro nutrients present in food. **10**
- (b) Write in detail about aseptic packaging of food products. List the various Aseptic packed food product. **10**
- Q4 (a) Explain in detail about Controlled Atmosphere Storage (CAS). **10**
- (b) Discuss various membrane concentration methods used in food industry and its effects on food. **10**
- Q5 (a) Write in Detail about following 1) Hurdle Technology 2) HACCP **10**
- (b) Explain in detail how Ultra filtration and Microfiltration is useful in food industry? **05**
- (c) Write manufacturing of Coffee Powder. **05**
- Q 6 (a) Write in detail fruit juice concentrate from raw fruits. **10**
- (b) Write in detail 1) D value 2) Z value **05**
- (c) Explain in detail freezing. **05**