

Tutorial

1. What is the food technology? And explain sources of food?
2. Explain the plant product?
3. Give the list of major manufactured food products?
4. What are the Principles of Quality Control of food industry?
5. What is World Food demand?
6. Increasing the World's Food Supply..How?
7. Explain Genetic Manipulation: GMO's (Genetically Modified Organisms)?
8. How will food issues be dealt with in the future?
9. Explain Food demand scenario in India?
10. What is Annual food consumption per capita?
11. Explain Constituents of food, quality and nutritive aspects?
12. Explain Types of Carbohydrates?
13. Explain Types of Protein?
14. What is fat and Recommendations for Fat Consumption?
15. What is Water Soluble Vitamins?
16. What are Food Additives?
17. Explain Composition of Food Additives?
18. What are Deteriorative factors and their control?
19. What is Genetic engineering?
20. Explain Storage of Raw Materials in food technology?
21. What is Food and Food Processing?
22. Define the Food Processing Methods?
23. Explain Foods and Beverages?
24. Define the Fruit & Vegetable Based Industries in India?
25. Explain different type of food processing methods?
26. Define the steam and explain integral and essential part of modern technology?
27. Explain Flash steam, blow down, feed tank?
28. What is boiler? And explain boiler type, Economic Boiler & classification?
29. Define the shell and tube heat exchanger and type of heat exchanger?

30. What is jet burner? Type of burner?
31. Define the safety valve and type of safety valve?
32. Define the hardness and explain the type of hardness?
33. Define the Ion exchange, Low water alarm, Dealkalisation?
34. What is water alarm? And define the type of water alarm?
35. What is a Thermo-physical property of frozen food?
36. Define the Indirect contact freezing systems?
37. Explain the freezing system?
38. How can you Estimate of Freezing Time of frozen food?
39. What is the processing to Freezing Fruits and Vegetables?
40. Define the packaging method of fruits & vegetables?
41. What is the method to estimate freezing time?
42. What is the refrigerator and explain its types?
43. Define the thermal death time and estimate it?
44. What is Food Preservation and define its methods?
45. What is Food frying and define its methods?
46. Define Accelerated electron beams (E-beams) and Electron beam treatment?
47. Explain X-rays principal and construction?
48. Why we are using Preservation of Food by Concentration?
49. What are the cooking techniques?
50. Discuss the principle of heating.
51. What is the function of microwave ovens?
52. Define pickling.
53. What is the difference between fermenting and pickling?
54. What is a membrane?
55. Discuss the advantage of membrane separation.
56. Define dialysis?
57. Define microfiltration?
58. Define ultra filtration?
59. Define Nano-filtration?
60. Define Reverse osmosis.

61. What are membrane modules?
62. Discuss hollow fiber membranes.
63. What are the advantages in food industry?
64. Define dehydration.
65. What are the reasons for drying of foods?
66. What is water activity?
67. What is the difference between free water and bound water?
68. What is constant rate period?
69. What is falling rate period?
70. What are drying method?
71. Discuss drum dryer.
72. Discuss infrared or dielectric dryers.
73. Discuss tunnel dryer.
74. What is atomization?
75. What is roasting?
76. Discuss the food production method.
77. What is the advantage of cook-freeze over cook-chil?
78. What are the advantages of cook- chill over cook-freeze?
79. What are the advantages of the sous-vide process?
80. Define Dry milling.
81. Define Wet milling.
82. Discuss Infusion method.
83. Discuss the process of curd formation.
84. What are the methods of preparation of meat?
85. What are the freezing methods of fish?
86. What is genetic engineering?
87. Discuss spray washing.
88. Discuss flotation washing.
89. Define the term peeling.
90. Define the term sorting.
91. Define the term Grading.

92. What are the methods of sorting?
93. What are the treatments of the waste?
94. Discuss Aerobic processes.
95. Discuss anaerobic processes.
96. What is canning?
97. What are the step taken in canning meat and poultry?
98. What is Sterilization?
99. Discuss the method of sterilization?
100. What is Heat Sterilization and explain temperature effect on it?
101. Heat penetration data on a vacuum packed corn are given in the Table. The target organism for this food is *C. Sporogenes* ($D_{\theta}=0.8$). What is the minimum processing time necessary to achieve commercial sterility for this food assuming instant cooling after the process?

Time(min)	T (Deg.F)	L
0	82	0
2	217	0.0146
4	230	0.0775
6	233	0.114
8	233	0.114
11	228	0.06
14	232	0.1
17	237	0.215
20	240	0.278
24	242	0.36
29	245	0.526
32	246	0.599
35	247	0.68