

B.Tech Food Technology
Semester II Examination, 2019
Paper Title: Introduction to Food Technology
Paper Code: BFTC – 205

B.Tech.

2019

2nd Sem

Max Marks 70

3 Hours

Note: 1. It is compulsory to answer all the questions of Section-A.

2. Answer any four questions in Section- B.

Section-A

Q1. Write short notes on the following:

(3*2=6M)

- a) Blanching
- b) Sterilization

Q2. i) Define water activity? How is water activity related to food safety?

(3M)

ii) Enlist the different driers used in food industry? Draw a well labeled diagram of a cabinet drier and explain its working.

(3M)

Q3. Differentiate between:

(3*2=6M)

- i) Drying and Dehydration
- ii) Slow freezing and Quick Freezing

Q4. Fill in the blanks:

(1*12=12M)

- i) The optimum temperature for the growth of thermodurics is _____.
- ii) The process of achieving commercial sterility of foods using radiations of $> 10 \text{ KGy}$ is known as _____.
- iii) The most heat resistant non spore forming microorganisms that are killed by pasteurization are _____ and _____.
- iv) The point at which water remains liquid although the temperature is below 0°C is known as _____.
- v) Temperature where there is no further concentration of solutes due to freezing and the solution freezes is known as _____.
- vi) Methods and technology used to transform agricultural products into food products is known as _____.
- vii) The process of sealing a food in an airtight container and destroying all microorganisms by heating is known as _____.
- viii) The process of lowering a products temperature to below approx -10°C is known as _____.
- ix) Peter Durand was granted first patent for _____.
- x) A low heat treatment in which there is elimination of pathogenic bacteria and reduction in numbers of spoilage bacteria is known as _____.
- xi) The dosage of $<1\text{KGy}$ used to inhibit sprouting in tubers is known as _____.
- xii) *Staphylococcus aureus* grows in the water activity range of _____.

Section- B (4*10=40)

Q1. i) What do you understand by Food Science & Food Technology? (Discuss Briefly)

(3M)

ii) Give the importance of food processing?

(3M)

iii) Give the scenario of cheese making keeping in view any four of the main areas involving food science & technology?

(4M)

Q2. Write short notes on any two of the following:

(2*5=10M)

- i) Factors affecting rate of drying
- ii) Commercial Sterilization
- iii) Food Irradiation
- iv) Pasteurization

Q3. i) Explain a typical drying curve for any food sample?

(5M)

ii) Give the classification of microorganisms on the basis of temperature. Explain with examples.

(5M)

Q4. Give an account of history and evolution of food science and technology? How did modern food technology come into existence?

(10M)

Q5. Give the principle behind freezing of foods. Explain the freezing curve for any given food sample?

(10M)

Q6. a) Give an account of the types of ionizing radiations used in food industry.

(5M)

b) Give the classification of foods on the basis of perishability.

(5M)