SUMMARY:

Refrigeration involves the storage of food products at lower temperatures to preserve them and to extend their shelf life, which would otherwise be reduced if food were stored at ambient temperatures. Refrigeration temperatures lower the rates of biochemical reactions and microbial growth, and consequently preserve foods for longer times. However, it is to be kept in mind that refrigeration does not act as bactericidal and upon subjecting the food to ambient conditions, the spoilage activities may resume. Every food has an optimum temperature of storage at which it has better quality attributes. Various kinds of refrigeration systems such as cyclic, non-cyclic and steam based find wide applications. Commonly found refrigeration systems are based on vapor compression in which a refrigerant circulates in high and low temperature sections. These sections are represented by the evaporator, compressor, condenser, and expansion valve. It removes heat from low temperature area and delivers it to high temperature area, which forms the basis for cooling stored food. The performance of refrigerators is estimated by what is known as “coefficient of performance” or C.O.P. Refrigeration finds wide use in fruits, vegetables, dairy products, meat products, beverages etc. During refrigerated storage however, certain changes in the texture, flavor, nutrient composition of the foods is also seen.