## **Glossary:**

- 1. Maillard reaction: It is the reaction between amino acids and reducing sugars to form brown pigments called melanoidins.
- 2. Caramelization: It is a non-enzymatic process, where there is formation of anhydro sugars or caramels as a result of exposure of sugar to high concentration and dry heat.
- 3. Melanoidins: Melanoidins are brown pigments formed during Maillard reaction.
- 4. Condensation: It is a chemical reaction where two smaller molecules combine to form a larger molecule together with loss of a small molecule.
- 5. Polymerization: It is a chemical reaction in which two or more monomers combine to form a large molecule or a polymer with repeating structural units.
- 6. Heyns rearrangement: It is the reaction between fructose and free amino groups from amino acids, peptides, or proteins. The order of formation of compounds in Heyns rearrangement is ketoseamine followed by diketoseamine and diamino sugar in the presence of aldose.
- 7. Strecker's degradation: The process of degradation of furfural and reductones to form osones and cross linking of these compounds with proteins to form advanced products such as 5hydroxymethyl- 2-furaldehyde and pyraline.
- 8. Specific rotation: Specific rotation is a property of chiral substances and is expressed as the angle to which the material causes polarized light to rotate at a particular temperature, wavelength, and concentration.
- 9. Enolization: The process of conversion of ketone into an enol.
- 10. Isomerization: The process of transformation of a molecule into its isomeric forms i.e., forms with the same composition but with different structure and configuration.
- 11. Modified Atmosphere Packaging: It is a controlled atmosphere of combination of gases especially oxygen, carbon-di-oxide and nitrogen mainly employed to prolong shelf life of a food.
- 12. Ultrasound-assisted thermal processing: It is a process which involves a combination of ultrasound and thermal energy for microbial and enzyme inactivation.
- 13. Acrylamide: It is a chemical formed by the reaction of sugar with an amino acid during high temperature cooking methods such as baking, roasting and frying.
- 14. Tautomers: They are isomers of a compound formed by intramolecular transfer of protons but have the same carbon skeleton.

15. Caramels: They are dark brown compounds formed by heating sugars in an anhydrous condition.