Glossary

1. **Enzymes -** Enzymes are biocatalyst that catalyses the conversion of a specific set of substrate into a specific product and they are neither consumed nor altered permanently.
2. **Holoenzymes -** the complete enzymes that contain both the protein part (apoenzyme) and the organic or metallo-organic molecule (cofactor/coenzyme), possessing the catalytic ability are called as holoenzymes.
3. **Active site** - the site of an enzyme, which acts as a pocket that contains amino acid residues to form a temporary bond with the substrate.
4. **Optimum temperature / pH** - The temperature or pH at which the activity of the enzyme is maximum is known as optimum temperature or pH.
5. **Michaelis Menten equation** - equation derived from the hypothesis that rate limiting step in an enzyme catalysed reaction is the conversion of the enzyme-substrate complex (ES) into the product (P) and free enzyme.

   $V_0=V_{max}$ [S] / K_m+ [S], where, V_0 represents initial velocity, V_{max} represents maximum velocity, [S] represents concentration of the substrate and K_M represents Michaelis constant.
6. **Unit activity** - A unit activity of an enzyme is defined as amount of specific enzyme responsible for conversion of 1 µmol a specific substrate to a final product per minute under a specific set of conditions.
7. **Total activity** - Total activity of an enzyme is defined as an activity of enzyme per ml of the extract.
8. **Specific activity** - Specific activity of an enzyme is defined as unit activity per milligram of protein and represented as µM/mg/min.
9. **Turnover number**: Turnover number (k_{cat}) of an enzyme is defined as the number of substrate molecules converted to a product by one enzyme molecule per second.
10. **Immobilized enzyme**: Immobilized enzyme is defined as cells (alive or dead) or enzyme anchored to a solid support for use in bioconversion of a specific substrate to a desired product.