

## **Learning Objectives**

- earning Objectives
  The objectives of this topic potes.
  Understand the structure of carbohydrates and lipids and their roles in living organisms.
- Understand the structure of proteins and their roles in living organisms.



## Carbohydrates

- Polysaccharides Notesale.co.uk from 15 of 53 Polysaccharides 9 large molecules composed of individual monosaccharide units.
  - A common plant polysaccharide is starch, which is made up of many glucoses.
  - Glycogen is an animal storage product that accumulates in the vertebrate liver.
  - Cellulose is a polysaccharide found in plant cell walls. Cellulose forms the fibrous part of the plant cell wall.

- Lipids are involved mainly 10 long-term energy storage.
  They are very living to a storage.
- erally in state in polar substances such as water. They are go
- Secondary functions of lipids are as structural components and as hormones that play roles in communications within and between cells.
- Lipids are composed of three fatty acids (usually) covalently bonded to a 3-carbon glycerol.





# Lipids

### **Phospholipids**

ds Notesale.co.uk from of 53 and globelipids are important structural components Phosphol of cell membranes.



# **Proteins**

- rcid Notesale.co.uk The building buck of any Brotein is the millio acid, which has an amino end (NH2) and a carboxyl end (COOH).
  - The R indicates the variable component of each amino acid.



Fig. 6



# **Proteins**





