

1- Carbohydrate metabolism

- *1-2 glycolysis*
- *1-2-1 glycolysis and alcoholic fermentation and gluconeogenesis*
- *1-2-2 the regulation of glycolysis*
- *1-2-3 the mechanism of LDH*
- *1-3 Cori cycle*
- *1-4 pentose phosphate pathway*
- *1-5 glycogen metabolism*

2- tricarboxylic acid cycle TCA

- *2-1 The formation of acetyl-coenzyme A*
- *2-2 TCA cycle*
- *2-3 glyoxylic acid cycle*
- *2-4 the regulation of TCA cycle*

3-lipid metabolism and oxidative phosphorylation

- *3-1 lipid absorption and transport*
- *3-2 (β -oxidation of fatty acids)*
- *3-3 cholesterol biosynthesis*
- *3-4 relation of lipid metabolism to other metabolic pathways.*
- *3-5 oxidative phosphorylation*

الكتب الأساسية:

D.L. Nelson, M.M. Cox "Lehninger principle of biochemistry", freeman 5th edition, 2008

المرجع المساند:

Mathyes 2010