M.B.B.S. [1st Prof.]

BF/2007/11

Biochemistry - A

M.M. : 50 **Time : 3 Hours**

Note : Attempt all questions.

1. **Write briefly :** [4x2.5=10]
   a. How Free Fatty Acids[FFAs] are transported into the mitochondria?
   b. How NADPH is synthesized and utilized in the body.
   c. Mention the regulation of Glycogenolysis in liver and muscles.
   d. Role of HMP pathway in RBC's.

2. **Answer briefly:** [4x2.5=10]
   a. Enumerate the various compounds synthesized from aromatic amino acids.
   b. Explain the regulation of HMG CoA reductase in the body. Name one pharmacological inhibitor of this enzyme.
   c. Mention the biological role of White & Brown adipose tissue in the body.
   d. What are the mixed function Oxygenases. Mention its importance in the body.

3. **Write short notes on:** [4x2.5=10]
   a. Nucleosome.
   b. Homocysteinuria.
   c. Primary & Secondary bile acids.
   d. Superoxide dismutase.

4. **Explain briefly:** [4x2.5=10]
   a. What is body's protective mechanism against formation of Methaemoglobin. Name one mutation and one aquired cause of Methaemoglobinemia.
   b. What are the non-functional Plasma enzyme? Mention their diagnostic importance.
   c. Mention the functions of IgE and IgA in the body.
   d. Name the different arms of tRNA and mention their function.

5. a. Discuss blood glucose homeostasis. [5]
   b. Describe the synthesis and regulation of Urea cycle. [5]
