

**Madhya Pradesh Medical Science University,  
Jabalpur  
MBBS First Professional Examination 2015  
Subject- Biochemistry  
Paper-I  
(NEW SCHEME)**

Time: 3 Hours

Maximum Marks:50

- a) All questions are compulsory
- b) Draw diagrams wherever necessary
- c) Answers of Questions and Sub-questions must be written strictly according to serial order of question paper.
- d) Do not write anything on the blank portion of question paper, if written anything such type of act will be considered as an attempt to resort to unfair means

**Q1. Long Answer questions – 10 MARKS**

- a. Enumerate sources of vitamin D, describe its biosynthesis and explain why vitamin D is called hormone  
5
- b. Explain the pathway of glycogen synthesis and glycogenolysis. In short explain role of branching and de-branching enzymes 5

**Q2. Short Answer Questions – 30 MARKS**

- a. Endoplasmic reticulum 3
- b. ~~Fluid mosaic model of biological membrane 3~~

- c. Electrophoresis 3
- d. Selenocysteine 3
- e. Na<sup>+</sup>-K<sup>+</sup> pump 3
- f. Cytochrome p450 3
- g. Inhibitors of electron transport chain 3
- h. Biosynthesis of thyroxine 3
- i. Isoenzymes 3
- j. Tyrosinemia 3

### **Q3. Very Short Answer Questions – 10 MARKS**

- a. Enumerate mechanisms of enzymes action 1
- b. Enumerate functions of glutathione 1
- c. Enumerate antioxidant vitamins 1
- d. Enumerate lipoproteins in human plasma 1
- e. Enumerate mechanisms of enzyme inhibition 1
- f. Enumerate functions of zinc 1
- g. Differentiate between starch and glycogen 1
- h. Why urea cycle is called a bicycle 1
- i. Alkaptonuria 1
- j. Draw structure of cholesterol 1

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