

**MU-4005****First Year M. B. B. S. Examination****December - 2015****Biochemistry : Paper - I**Time : $2\frac{1}{2}$ Hours]

[Total Marks : 40

Instruction :

Fill up strictly the details of signs on your answer book.		Seat No. :	
Name of the Examination :			
Name of the Subject :			
Subject Code No. : 4 0 0 5		Section No. (1, 2,) : 1&2	
FIRST YEAR M. B. B. S.		Student's Signature	
BIOCHEMISTRY : PAPER - 1			

SECTION - I

- 1 Short notes : (2 out of 3) 8
 - a. Regulation of pH
 - b. Diabetes mellitus
 - c. Phospholipids.

- 2 Write in brief : (4 out of 6) 12
 - a. Biological importance of HMP Shunt
 - b. HbA1C
 - c. Malnutrition
 - d. Chemiosmotic theory of ATP production
 - e. Atherosclerosis
 - f. ATP.

MU-4005]

1

[Contd.....



SECTION - II

- 3 Read the case and answer the questions given below : 10

A 54 year old unconscious obese person was brought to emergency department with increase respiratory rate and very low blood pressure (70/40 mm Hg). Random blood glucose using Glucometer showed 780 mg/dl result. Arterial blood showed pH of 7.1. Serum ketone bodies were high.

1. How body mass index is used to diagnose obesity ?
2. Why does respiratory rate increase in response to metabolic acidosis ?
3. Define fasting and post-prandial glucose.
4. Name organ producing ketone bodies. Are ketone bodies useful to body ? Explain.
5. Why does uncontrolled diabetes mellitus cause acidosis ?

- 4 Write Justification in 2-3 lines : (5 out of 7) 10

- a. Na⁺-Glucose cotransport is important in the treatment of diarrhea.
- b. Brown adipose tissue reduces obesity.
- c. Sucrose is non reducing sugar
- d. Tri-carboxylic acid cycle is amphibolic.
- e. Aspirin reduces platelet aggregation.
- f. Cataract is more common in galactosemia.
- g. Fibers in diet are essential nutrients.