

**2011**

**M.Sc.**

**1st Semester Examination**

**BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT**

**PAPER—101 (UNIT—I)**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Answer all questions.*

**Module—I**

**(Basic Human Physiology and Anatomy)**

*marks to* [Marks : 20] *of*

**1. Answer any five of the followings :** 1×5

- (a) What is glucosuria?
- (b) What is apoptosis?
- (c) Write the causes of hemophilia.
- (d) What is pancreatitis?

*(Turn Over)*

- (e) Write the importance of anatomical deadspace.
  - (f) Write the names of any two antioxidative enzymes.
  - (g) Write the name of enzymes present in saliva.
  - (h) What do you mean by surface anatomy?
2. (a) Describe the role of renin-angiotensin system in regulation of blood pressure.
- (b) Mention how hypertension is related to stress.

4+4

Or

- (a) Describe briefly with a schematic diagram about the generation of ATP from NADH by electron transport chain.
- (b) Describe briefly the sliding filament theory of muscle contraction.

5+3

3. (a) Mention the basic mechanism of cellular apoptosis.
- (b) Why obesity may result infertility in male and female?

4+(1½+1½)

Or

- (a) What is pleura?
- (b) How pleural fluid is collected?
- (c) Name the different parts of biliary system. 2+2+3

**Module—II**

**(Physiological aspect of Biomedical Laboratory Science)**

[Marks : 20]

4. Answer any five of the following : 1×5
- (a) What do you mean by 'First order of enzyme action' ?
  - (b) What do you mean by resolution of compound microscope ?
  - (c) Define end point reaction.
  - (d) Write the H-H equation of pH determination.
  - (e) Write one application of dialysis.
  - (f) Define ultrafiltration.
  - (g) What do you mean by  $\lambda_{\max}$  of a substance ?
  - (h) What is allosteric enzyme ?
5. (a) Write the deduction of M-M equation and convert it into straight line equation.
- (b) Write the graphical presentation of M-series of allosteric enzyme with enzyme. (4+2)+2

Or

- (a) Write the principle of image formation in compound microscope.

(b) What is Beer-Lambert's Law and its application?  
4+(2+2)

6. (a) Write in brief about renal dialysis.

(b) What do you mean by electrolysis and electromagnet  
dialysis.  
4+(1½+1½)

Or

(a) Write the application of pH maintenance in our body

(b) "Kidney plays a vital role of blood pH maintenanc  
in parallel with lungs." Justify the statement.

4+3