

**I – B.D.S. (2008 COURSE) : WINTER - 2017**  
**SUBJECT : GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY**

Day : Friday  
Date : 03/11/2017

**W-2017-3493**

Time 09.00 AM TO 12.00 NOON  
Max. Marks : 70

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

**SECTION – I**

**Q.1** Define blood pressure. Describe various mechanisms of regulation of blood pressure. **(10)**

**OR**

Describe molecular basis of skeletal muscle contraction.

**Q.2** Write short notes on any **THREE** of the following: (3 x 5) **(15)**

- a) ABO blood group system
- b) Muscles of respiration
- c) Tracts of spinal cord
- d) Physiological actions of growth hormone.

**Q.3** Answer any **FIVE** of the following: (5 x 2) **(10)**

- a) Define glomerular filtration rate.
- b) Enlist various mechanisms of transport across cell membrane.
- c) What are the functions of gastric juice ?
- d) Enumerate various mechanisms of hemostasis.
- e) Define hypoxia. What are its types?
- f) State properties of synapse.

**SECTION – II**

**Q.4** Describe the sources, Recommended Dietary Allowance (RDA) and deficiency manifestations of Vitamin D. (2+1+3+4) **(10)**

**OR**

Describe urea cycle. Write the importance of measuring blood urea level. (5+5)

**Q.5** Write notes on any **THREE** of the following: (3 x 5) **(15)**

- a) Blood buffers
- b) RNA and its different types
- c) Hormonal regulation of serum calcium level
- d) Diagnostic applications of enzymes

**Q.6** Answer any **FIVE** of the following: (5 x 2) **(10)**

- a) Enumerate four functions of cholesterol.
- b) Enlist various hormones in regulation of blood glucose level.
- c) Enumerate various bonds which stabilize protein structure.
- d) Define Clearance. Give examples of clearance tests.
- e) Enumerate types and functions of lipoproteins.
- f) Enumerate any four B complex vitamins with their active forms.

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