

B.Sc. (With Credits)-Regular-Semester 2012 Sem I
001-Biochemistry : Paper-I (Human Physiology)

P. Pages : 2

Time : Three Hours



GUG/W/16/3296

Max. Marks : 50

- Notes : 1. All questions are compulsory & carry equal marks.
2. Draw diagrams wherever necessary.

1. Describe in detail the mechanism of urine formation by the kidney. **10**

OR

What is a nerve impulse? Describe in detail the mechanism of nerve impulse transmission by a myelinated & non myelinated nerve fibre. **10**

2. Give a detailed account of composition of biological membranes. **10**

OR

Give a detailed account of the functions of following hormones. **10**

- i) Thyroxine
- ii) Insulin

3. a) Describe the functions of granulocytes. **2½**
b) Describe the digestion of proteins by the gastric enzymes. **2½**
c) Write a short note on Na-k pump. **2½**
d) Give the classification of hormones. **2½**

OR

e) Briefly describe the functions of plasma proteins. **2½**
f) Describe the absorption of carbohydrates by the intestinal villi.. **2½**
g) Draw a well labelled diagram of a neuro-muscular junction. **2½**
h) Briefly describe the functions of male sex hormones. **2½**

4. a) Describe the functions of hemoglobin. **2½**
b) What are synapses? Give the morphological classification of synapses. **2½**
c) Explain sliding mechanism of muscle contraction. **2½**
d) Describe the functions of adrenal medulla. **2½**

OR

e) Explain how kidney regulates acid base balance by bicarbonate mechanism. **2½**
f) Briefly explain the mechanism of synaptic transmission. **2½**
g) Write a note on facilitated diffusion. **2½**
h) Write a note on oogenesis. **2½**

5. Answer **any ten** of the following:

10

- a) What are thrombocytes?
- b) What is chloride shift?
- c) Name the two agranulocytes.
- d) Name any lipolytic enzyme.
- e) Define all or none law.
- f) Name any amino acid which acts as a neurotransmitter.
- g) Name the scientists who proposed fluid mosaic model of biological membranes.
- h) What is a calcium pump?
- i) Name the two main proteins of muscle fibre.
- j) Define spermatogenesis?
- k) HCG is human chorionic -----
- l) Name any one second messenger.
