

Bachelor of Science (F.Y.B.Sc.) (Part-I) First Semester (Old)  
**001 – Biochemistry-I Paper-I (Human Physiology)**

P. Pages : 2

Time : Three Hours



**GUG/W/18/1198**

Max. Marks : 50

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

1. Describe in detail Mechanism of transport of O<sub>2</sub> by blood. 10

**OR**

Give a detail account of transmission of impulse through the synapse. 10

2. Describe in detail Active & Passive transport. 10

**OR**

Explain in detail menstrual cycle. 10

3. a) Enlist the functions of platelets. 2½

b) Write a note on "All or none law" & "Refractory Period". 2½

c) Draw a well diagram of neuromuscular junction. 2½

d) Describe Oogenesis. 2½

**OR**

e) Explain how kidney regulate acid-base balance. 2½

f) Describe absorption of fats. 2½

g) Write a note on membrane composition. 2½

h) Write in brief about HCG & its functions. 2½

4. a) Briefly describe Bohr's effect. 2½

b) Describe gastric digestion of carbohydrates. 2½

c) Write in brief Na<sup>+</sup> – K<sup>+</sup> pump. 2½

d) Describe cAMP as secondary messenger. 2½

**OR**

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|----|--|----|
| e) | Describe Juxtaglomerular apparatus.                                | 2½ |
| f) | Draw a well labelled diagram of a multipolar neuron.               | 2½ |
| g) | Write in brief about fluid mosaic model.                           | 2½ |
| h) | Give the list of hormones secreted by pituitary with its function. | 2½ |

5. Attempt **any ten** from following.

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|----|--|---|
| a) | Define Chloride shift.   | 1 |
| b) | Give any two functions of monocytes.                                 | 1 |
| c) | Draw the structure of nephron.                                       | 1 |
| d) | Define membrane potential.   | 1 |
| e) | What is nerve impulse?   | 1 |
| f) | Name any two enzyme responsible for digestion of proteins.           | 1 |
| g) | Draw Calcium pump.   | 1 |
| h) | Define 'Z' line in muscle structure.                                 | 1 |
| i) | Which ion play important in sliding mechanism of muscle contraction? | 1 |
| j) | Give any two functions of thyroid gland.                             | 1 |
| k) | Give the function of glycogen.                                       | 1 |
| l) | Give the name of any six hormones.                                   | 1 |

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