**ST. GREGORIOS DENTAL COLLEGE, CHELAD**

**Reg. No.: .....................**  
**First Year BDS Degree Regular II Internal Examinations, Answer key March 2024**

**General Human Physiology and Biochemistry**

**(2016 Scheme)  
Time: 3 hrs Max marks: 70**  
**• Answer all questions to the point neatly and legibly • Do not leave any blank pages between  
answers • Indicate the question number correctly for the answer in the margin space  
• Answer all parts of a single question together • Leave sufficient space between answers  
• Draw Diagrams wherever necessary  
• Write section A and section B in separate answer books (32 pages). Do not mix up questions  
from section A and section B**

**Q P Code: 112002 Section A: Physiology Max Marks: 35**

**Essay: (1+3+4+2=10 )** 1. Definition of saliva, mechanism of primary and secondary secretion. Composition

and major functions of saliva. Sympathetic and parasympathetic mechanism of

regulation of saliva.

**Short Notes:**2. Explain the four ways by which CO2 is transported across the blood. Explain

Haldane effect and its significance. **(4+1=5)**  
3. Definition -GFR- normal value, factors affecting – capillary hydrostatic pressure,

Colloidal osmotic pressure in glomerulus, Bauman’s capsule hydrostatic pressure,

Tubuloglomerular feedback mechanism. **(1+4=5)**

**Answer Briefly: (5x3=15)**4. Definition, composition and main functions.  
5. JGA- structure, explanation of Macula densa, JG cells and extra glomerular

mesangial cells.  
6. Definition, normal value, variations in physiological and pathological conditions.  
7. Sino-aortic reflex mechanism for controlling BP and HR – Baroreceptor and

chemoreceptor mechanism.

8. Major proteolytic, lipolytic and amylolytic enzymes of pancreas.

**Q P Code: 113002 Section B: Biochemistry Max Marks: 35**

**Essay:**   
1. Mechanism of competitive inhibition (4), Two clinical significances (2), marker

Enzymes in liver and cardiac diseases (4).

**Short Notes:**2. Absorption of iron (3), Transport of iron (2)  
3. Deficiency of Vit A on vision, skin, growth and reproduction. (5)

**Answer Briefly:**4 Any three functions of albumin – osmotic balance, transport, buffering action,

Nutritive function. (3)  
5. Graphical representation (2), mention significance of Km value (1)  
6. Functions (1), deficiency (1) and toxicity (1) of fluorine.  
7. Explain chemiosmotic theory (3).

8. Beer-Lambert’s law (3).