

**First BHMS Degree Supplementary Examinations April 2018**

**Physiology & Biochemistry I  
(2015 scheme)**

**Time: 3 hrs**

**Max marks: 100**

- **Answer all questions**
- **Draw diagram wherever necessary**

**Long Essay**

**(2x15=30)**

1. Mention the normal values of plasma proteins in blood. Describe the various methods of separation of plasma proteins. How packed cell volume is determined. (3+9+3)
2. Define cardiac cycle. Explain intra-arterial pressure changes during cardiac cycle.  
Explain ventricular events in the cardiac cycle (2+8+5)

**Short Essay**

**(5x8=40)**

3. Mention the maturation factors involved in the erythropoiesis and add a note on each one of them. What is reticulocytosis and mention its significance (6+2)
4. Describe the characteristics features of pulmonary circulation. Mention the factors that regulate pulmonary regulation (5+3)
5. What is lung surfactant and explain its functions. Name two muscles that take part in normal inspiration and forced inspiration. (2+3+3)
6. Explain the action of hormones regulating tubular reabsorption. How glucose is reabsorbed in renal tubules (5+3)
7. Describe the mechanism involved in the concentration of urine and add a note on role of ADH (6+2)

**Short notes**

**(10x3=30)**

8. Mention two types of buffer system
9. Active transport
10. Mention four functions of haemoglobin
11. What is ejection fraction.
12. Define cardiac murmur
13. What is diffusing capacity and mention two factors affecting it
14. Micturition reflex
15. Mention three differences between the eccrine and apocrine glands
16. Excitability or strength duration curve
17. Compare skeletal and cardiac muscle

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