



**Q.P. Code: 103001**

**First Professional MBBS Degree Examinations - August 2015**

**PHYSIOLOGY – Paper I**

**Time: 3 Hours**

**Total Marks: 50**

- Answer all questions
- Draw Diagrams wherever necessary

**Long essay**

**(10)**

1. A 30 years old lady presented with history of cough and breathlessness that got worse during the winter months every year. She also complained of occasional whistling sounds arising from the chest during breathing. Answer the following :
  - What is the most likely clinical diagnosis of her condition
  - What major findings would her pulmonary function tests show
  - What kind of medication would she likely benefit from
  - Depict the different lung volumes and capacities with the help of a neatly labeled diagram
  - what is the significance of residual volume

(1+2+1+4+2=10)

**Short essays**

**(2x5 =10)**

2. Describe the peculiarities of the coronary circulation
3. Describe the mechanism of gastric acid secretion

**Answer briefly**

**(5x3=15)**

4. Renal clearance
5. Bombay blood group
6. Deglutition reflex
7. Hyperthermia
8. Peripheral chemo receptors

**Draw and label**

**(2x2½ =5)**

9. Cystometrogram
10. Respiratory membrane

**Explain the physiological basis of the following**

**(5x2=10)**

11. Change of posture from supine to standing causes tachycardia
12. Prolonged stay at high altitude increases the hematocrit
13. Hemoglobin saturation in arterial blood is usually less than 100%
14. Partial gastrectomy results in anemia
15. Raised intracranial pressure causes bradycardia and hypertension

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