



First Professional MBBS Degree Supplementary Examinations, February 2014

PHYSIOLOGY – Paper I

Time: 3 Hours

Total Marks: 50

- Answer all questions
- Draw Diagrams wherever necessary

Long essay

(10)

1. A 40 years old man was admitted to hospital with complaints of difficulty in breathing and shortness of breath following a head injury. Answer the following :
 - With the help of diagrams describe two types of periodic breathing
 - Explain the physiological basis for the changes in periodic breathing
 - Describe the role of peripheral chemo receptors in regulation of normal respiration

(3+2+5=10)

Short essays

(2x5 =10)

2. Discuss the factors affecting cardiac output and add a note on Brainbridge reflex
3. Describe the counter current multiplier in the kidney

Answer briefly

(5x3=15)

4. Hypoxic hypoxia
5. Proteolytic pancreatic enzymes
6. Auto regulation of glomerular filtration rate
7. First and second heart sounds
8. Gastric emptying time

Draw and label

(2x2½ =5)

9. Left Ventricular pressure changes recorded during a normal cardiac cycle
10. Effect of pH on the oxygen – hemoglobin dissociation curve

Explain the physiological basis of the following

(5x2=10)

11. Oxygen debt
12. Receptive relaxation
13. Prolonged standing results in fainting attacks
14. Prolonged action potential in cardiac muscle
15. Protective effect of vaccination
