

# Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - February 2007

Time: 3 Hrs.

[Max. Marks: 90]

## PHYSIOLOGY - PAPER I (Old Scheme)

### QP Code: 1003

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary.

#### LONG ESSAY

**2 X 10 = 20 Marks**

1. Describe the structure of a skeletal muscle. Explain the molecular basis of skeletal muscle contraction.
2. Define haemostasis. Describe the stages of haemostasis. Describe the mechanism of blood coagulation.

#### SHORT ESSAY

**10 X 5 = 50 Marks**

3. Enumerate different modes of transport across cell membrane describe osmosis and osmotic pressure.
4. Describe ionic basis and properties of action potential.
5. What are the contents of gastric juice? Give the physiological basis of treatment of peptic ulcer.
6. Define deglutition. Describe the stages of deglutition with their regulation.
7. Describe juxtaglomerular apparatus along with its functions.
8. Describe the functions of proximal convoluted tubule.
9. Describe the factors affecting coronary circulation.
10. Describe pressure changes in jugular vein and aorta during different phases of cardiac cycle.
11. In which forms  $\text{CO}_2$  is carried in blood? Describe 'chloride shift'.
12. Describe the factors affecting diffusion of gases through alveolo-capillary membrane.

#### SHORT ANSWERS

**10 X 2 = 20 Marks**

13. Give two examples of negative feedback mechanism.
14. Erythroblastosis foetalis.
15. Salutatory conduction.
16. Differentiate between red and pale muscle
17. Choloretic and cholagogues.
18. Renal splay.
19. Windkessel's effect.
20. Enlist gastro intestinal hormones.
21. Anatomical and physiological dead space.
22. After effects of voluntary apnoea and voluntary hyperventilation.

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