

# Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2010

Time: 3 Hrs.

[Max. Marks: 100]

## PHYSIOLOGY - PAPER I (Revised Scheme)

### QP Code: 1053

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

#### LONG ESSAY

**2 X 9 = 18 Marks**

1. Describe the innervation of urinary bladder. Explain how micturation takes place
2. Describe in detail the various methods of Carbon-dioxide transport in the blood. What is Haldane's effect?

#### SHORT ESSAY

**10 X 5 = 50 Marks**

3. Describe right atrial pressure changes during cardiac cycle
4. Describe the mechanism of generation of impulse in the sino-atrial node. How does the impulse spread?
5. Describe the role of vasomotor center in regulation of arterial blood pressure
6. Describe the physiological basis of peptic ulcer. How do various drugs act on its treatment?
7. Name the gastro intestinal hormones. Describe the functions of cholecystokinin
8. Describe how dietary protein is converted to aminoacids
9. Explain the role of 'B' lymphocytes in immunity
10. Describe the functions of plasma proteins
11. Give a note on fibrinolytic system
12. What is anatomical and physiological dead space? Describe a method to determine anatomical dead space

#### SHORT ANSWERS

**16 X 2 = 32 Marks**

13. What are different methods of inter cellular communication?
14. Explain the factors affecting simple diffusion across cell membrane
15. Explain what is steatorrhea
16. Explain how gastrin acts on gastric juice secretion
17. Find out mean arterial blood pressure, if systolic pressure is 120 mm Hg and diastolic pressure is 90 mm Hg
18. What is Reynold's number and what is its significance?
19. Explain the direct effect of CO<sub>2</sub> and hypoxia on vasomotor center
20. What is reactive hyperemia? Where does it occur?
21. Explain the role of myoglobin in oxygen transport
22. Explain how water is reabsorbed in collecting duct
23. Explain the intra-pleural pressure changes during respiration
24. Explain the features of Biot's breathing. In what pathological conditions is it seen?
25. Explain colour index and its significance
26. What are the effects of vitamin B<sub>12</sub> and folic acid on erythropoiesis?
27. Mention the functions of Basophils
28. Explain what is irreversible shock