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Q.P Code-104

**Sri Devaraj Urs University**

(Formerly known as Sri Devaraj Urs Academy of Higher Education and Research)

1<sup>st</sup> M.B.B.S. PHASE - I Degree Supplementary Examination – Jan. 2009

Time : 3 Hrs.

[Max. Marks : 100]

**PHYSIOLOGY - Paper II**

*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 mode of action and the effects of insulin. How is its secretion regulated?
2. Elucidate the Physiological role of the hypothalamus?

**SHORT ESSAY**

10 X 5 = 50 Marks

3. Heart as an endocrine gland
4. Formation and actions of calcitriol.
5. Spermatogenesis – phases and factors.
6. Sources and actions of progesterone.
7. Single unit and multi unit smooth muscle.
8. Role of calcium in muscle contraction and relaxation.
9. Paradoxical sleep.
10. Mossy fibres and climbing fibres.
11. Olfactory pathway.
12. Accommodation to near vision.

**SHORT ANSWERS**

10 X 3 = 30 Marks

13. Rhythm method of contraception.
14. Axon reflex
15. Myelination of nerve fibres
16. Thermal receptors.
17. Myotatic reflexes.
18. Subthalamic nucleus of Luys.
19. Aphasia.
20. Taste buds.
21. Impedance matching in Ear.
22. Cones in colour vision

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Time : 3 Hrs.

[Max. Marks : 100]

### **PHYSIOLOGY - Paper I**

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

#### **LONG ESSAY**

**2 X 10 = 20 Marks**

1. Define Stroke volume, Cardiac output and Cardiac index. Discuss the role of Starlings Law in influencing Cardiac output.
2. Describe the Neural Regulation of Respiration. Add a note on Hering – Breuer Reflex.

#### **SHORT ESSAY**

**10 X 5 = 50 Marks**

3. Role of 'T' Lymphocytes in immunity.
4. Importance of Rhesus Blood Group.
5. Functions of Bile Juice.
6. Movements of small intestine.
7. Counter current multiplier system.
8. Active Transport Mechanism.
9. Special features of Coronary Circulation.
10. How does a person adapt to high altitudes?
11. Mention in Vivo Anticoagulants and their mode of action.
12. Write on Renal Regulation of Acid Base Balance.

#### **SHORT ANSWERS**

**10 X 3 = 30 Marks**

13. What is the normal PR interval? When is it prolonged?
14. Timed Vital Capacity.
15. Transport Functions of Plasma Proteins.
16. Mechanism of HCl (Hydrochloric Acid) Secretion by Gastric parietal cells.
17. Micturition Reflex.
18. Tubular Maximum.
19. Composition and Functions of succus entericus.
20. Second Heart Sound.
21. Chloride Shift.
22. Erythropoietin

