Reg. No.										

MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) PHYSIOLOGY DEGREE EXAMINATION – FEBRUARY 2012

PAPER I: GENERAL PHYSIOLOGY, NERVOUS SYSTEM INCLUDING SPECIAL SENSES AND MUSCLES

Tuesday, February 07, 2012

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

- **Answer ALL the questions.**
- **Draw neat labeled diagram wherever appropriate.**

1. Discuss the process of neuromuscular transmission in a skeletal muscle with the help of suitable diagrams. Add a note on neuromuscular blockers.

(15+5 = 20 marks)

2. Discuss the relevant neuroanatomy and functions of limbic system.

(20 marks)

3. Discuss the spinal cord reflexes and their functions.

(20 marks)

4. Explain how we perceive

4A. Depth and Colour

4B. Pitch and Intensity of sound

(10+10 = 20 marks)

5. Discuss the different transport mechanisms across the cell membrane with suitable examples.

(20 marks)

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M.Sc. MEDICAL (FINAL) PHYSIOLOGY DEGREE EXAMINATION – FEBRUARY 2012

PAPER II: CARDIOVASCULAR PHYSIOLOGY, RESPIRATORY SYSTEM, RENAL PHYSIOLOGY AND BLOOD

Wednesday, February 08, 2012

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

✍ **Answer ALL the questions.**

1. Describe the coagulation pathways.

(20 marks)

2. Explain the origin and spread of cardiac impulse.

(20 marks)

3. Describe the uptake and transport of oxygen in blood.

(20 marks)

4. Explain the functions of proximal convoluted tubules of nephrons.

(20 marks)

5. **Write briefly on:**

5A. Arterial baroreceptors

5B. Respiratory muscles

5C. Thermoreceptors

5D. Phasic coronary flow

(5×4 = 20 marks)

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M.Sc. MEDICAL (FINAL) PHYSIOLOGY DEGREE EXAMINATION – FEBRUARY 2012

PAPER III: GASTROINTESTINAL TRACT, ENDOCRINOLOGY AND REPRODUCTION

Thursday, February 09, 2012

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

Answer ALL questions. All questions carry equal marks.

1. With an example explain the different mechanisms operating in the body for regulation of secretion of hormone.

2. Describe the actions of Glucocorticoid and briefly explain the physiological basis for the features observed in Addision's disease.

3. Describe the actions of female sex hormones on different parts of the body during the reproductive phase.

4. Describe the importance of peristaltic contractions in the GI tract functions.

5. **Write briefly on:**

5A. Endocrine function of placenta

5B. Cause and features of Dwarfism

5C. Tests to asses fertility in male

5D. Pavlov's pouch