

MANIPAL UNIVERSITY

MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2008

SUBJECT: PAPER I: GENERAL PHYSIOLOGY, NERVOUS SYSTEM, SPECIAL SENSES

Tuesday, April 01, 2008

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions. All questions carry equal marks.**

1. Explain the principle underlying measurement of volume of body fluid compartments.
Compare the composition of different body fluid compartments.

(20 marks)

2. Describe the pain inhibiting mechanisms of the body.

(20 marks)

3. Write briefly on:
 - 3A. Aphasia.
 - 3B. Pathophysiology of obesity.

(10+10 = 20 marks)

4. Discuss the modern views of mechanism of colour vision and the pathophysiology of colour blindness.

(20 marks)

5. Discuss the connections and functions of prefrontal lobes. Add a note on the effects of prefrontal lobectomy.

(20 marks)

MANIPAL UNIVERSITY**MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2008****SUBJECT: PAPER II: CARDIOVASCULAR & RESPIRATORY SYSTEM,
RENAL PHYSIOLOGY AND BLOOD**

Wednesday, April 02, 2008

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions. All questions carry equal marks.**

1. Discuss the pulmonary function tests in detail and add a note on their clinical application.
(20 marks)
2. Describe in detail homometric and heterometric regulation of the heart with special reference to Frank-Starlings law.
(20 marks)
3. Name the various blood group systems. Describe the different types of blood transfusions. Add a note on changes in stored blood.
(20 marks)
4. Describe the role of counter-current systems in the concentration of urine.
(20 marks)
5. Discuss the special features of coronary circulation. Add a note on the principles of treatment of angina pectoris.
(20 marks)

MANIPAL UNIVERSITY**MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2008****SUBJECT: PAPER III: GASTROINTESTINAL TRACT, ENDOCRINOLOGY
AND REPRODUCTION**

Thursday, April 03, 2008

Time: 3 Hrs.

Max. Marks: 100

✍ Answer ALL the questions. All questions carry equal marks.

1. Describe the endocrine regulation of calcium metabolism.
(20 marks)
2. Discuss the role of hypothalamus in endocrine regulation.
(20 marks)
3. Describe the changes in the body during pregnancy.
(20 marks)
4. Describe the functions of testes.
(20 marks)
5. Describe the role of hormones in gastrointestinal function.
(20 marks)

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MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2008

SUBJECT: PAPER IV: RECENT ADVANCES IN PHYSIOLOGY, APPLIED AND CLINICAL PHYSIOLOGY

Friday, April 04, 2008

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions. All questions carry equal marks.**

1. Discuss immunity.
(25 marks)

2. Describe the physiological basis of diabetic ketoacidosis. Explain the principles of treatment of diabetes mellitus.
(25 marks)

3. Discuss the physiology of growth.
(25 marks)

4. Write briefly on the following:
 - 4A. Perimetry
 - 4B. Nerve degeneration and regeneration.(10+15 = 25 marks)

