

MANIPAL UNIVERSITY**FIRST MBBS DEGREE EXAMINATION – AUGUST 2012****SUBJECT: PHYSIOLOGY– PAPER I (ESSAY)**

Monday, August 13, 2012

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

1. Name the functional lobes of cerebellum. Describe the functions of cerebellum and abnormalities produced in cerebellar lesions.
(1½+5½+3 = 10 marks)
2. List four consequences of insulin deficiency and explain how each of these abnormalities is produced.
(2+4 = 6 marks)
3. Describe the physiological actions and control of secretion of androgens in an adult.
(4+2 = 6 marks)
- 4A. Explain the ionic movements that occur during a nerve action potential.
(3 marks)
- 4B. Name the pupillary reflexes. Draw the path for any one type of pupillary reflex.
(1+2 = 3 marks)
- 4C. With the help of a graph, explain dark adaptation in the eye.
(3 marks)
- 4D. Define motor unit and explain its significance.
(1+2 = 3 marks)
- 4E. Describe the role of endogenous analgesia system in the modulation of pain.
(3 marks)
- 4F. Explain three important physiological actions of glucocorticoids.
(3 marks)



MANIPAL UNIVERSITY**FIRST MBBS DEGREE EXAMINATION – AUGUST 2012****SUBJECT: PHYSIOLOGY– PAPER II (ESSAY)**

Tuesday, August 14, 2012

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

1. Define cardiac out. Give its normal value. Briefly outline the Fick's method of determination of cardiac output. Explain the various factors that control cardiac output.
(1+3+6 = 10 marks)
- 2A. Describe in detail how oxygen is transported in blood.
- 2B. Explain the role of lymphocytes in immunity.
(6+6 = 12 marks)
- 3A. Explain the property of all or none law in a cardiac muscle.
(3 marks)
- 3B. Draw a labelled left ventricular pressure curve indicating the opening and closing of various valves.
(3 marks)
- 3C. Name any two special features of renal circulation and outline the physiological importance of any one of them.
(1+2 = 3 marks)
- 3D. Explain how osmotic and water diuresis are brought about.
(1½+1½ = 3 marks)
- 3E. Draw a labelled reflex diagram to show how presence of blood causes salivary secretion.
(1+2 = 3 marks)
- 3F. Name and mention the role of proteolytic enzymes of pancreas.
(3 marks)

