

MANIPAL UNIVERSITY**FIRST MBBS DEGREE EXAMINATION – AUGUST 2008****SUBJECT: PHYSIOLOGY– PAPER I (ESSAY)**

Thursday, August 14, 2008

Time: 10:20–13:00 Hours.

Maximum Marks: 40

1. Draw a diagram to show the pain pathway from the left little toe. Add a note on 'endogenous pain relief' system.
(6+4 = 10 marks)
2. Define 'Menstrual cycle'. Describe the ovarian changes during a menstrual cycle and explain their hormonal basis. Add a note on "timing of ovulation" and significance of it.
(1+3+2 = 6 marks)
3. Give the normal serum calcium level. Describe the hormonal control of calcium metabolism.
(1+5 = 6 marks)
- 4A. Explain the features of a cerebellar lesion in the left cerebellar hemisphere.
(3 marks)
- 4B. Explain the features and hormonal basis of:
 - i) Acromegaly
 - ii) Cretinism
(1½+ 1½ = 3 marks)
- 4C. List the functions of 'frontal lobe' of brain and effects of prefrontal lobotomy.
(3 marks)
- 4D. Draw labelled diagrams of 'sarcomere' at rest and during contraction to indicate clearly the changes in the different bands.
(3 marks)
- 4E. Explain any two refractive errors of the eye. Give the basis of correction.
(2+1 = 3 marks)
- 4F. List the functions of middle ear. Explain any one.
(3 marks)



MANIPAL UNIVERSITY**FIRST MBBS DEGREE EXAMINATION – AUGUST 2008****SUBJECT: PHYSIOLOGY– PAPER II (ESSAY)**

Saturday, August 16, 2008

Time: 10:20–13:00 Hours.

Maximum Marks: 40

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1. Define cardiac output and give its normal value. Describe the regulation of cardiac output.
(2+8 = 10 marks)
 2. Explain the role of muscles in causing movement of air into and out of the lungs. Add a note on 'lung compliance'.
(4+2 = 6 marks)
 3. List the stages of erythropoiesis and the changes occurring during erythropoiesis. Name tests to assess erythropoiesis. Name two sites of erythropoiesis in a foetus.
(3+2+1 = 6 marks)
 - 4A. Explain renal reabsorption of glucose.
(3 marks)
 - 4B. Give the components and functions of juxta glomerular apparatus.
(3 marks)
 - 4C. Explain functions of bile salts.
(3 marks)
 - 4D. Explain 'Defecation reflex' with the help of a diagram.
(3 marks)
 - 4E. Draw a diagram to show the various parts of the conducting system of human heart. Explain the importance of nodal delay.
(2+1 = 3 marks)
 - 4F. Explain the role of:
 - i) Elastic arteries
 - ii) Arterioles
(3 marks)