

MANIPAL UNIVERSITY

FIRST MBBS DEGREE EXAMINATION – AUGUST 2009

SUBJECT: PHYSIOLOGY– PAPER I (ESSAY)

Thursday, August 13, 2009

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

✍ All questions are compulsory .Write brief, clear and legible answers.

✍ Illustrate your answers with diagrams and flow charts wherever appropriate.

1. Describe the pathway for pain sensation from trunk and face. Add note on referred pain.
(7+3 = 10 marks)
2. Name the posterior pituitary hormones and describe their actions.
(6 marks)
3. Describe the sequence of events in neuromuscular transmission. Add a note on Neuromuscular blocking agents.
(4+2 = 6 marks)
- 4A. Explain the factors influencing spermatogenesis.
(3 marks)
- 4B. Oral contraceptive pills and IUCD in prevention of conception.
(1½+1½ = 3 marks)
- 4C. Draw a diagram and explain how a nerve impulse is propagated in a:
 - i) myelinated nerve fiber
 - ii) non myelinated fiber.
(3 marks)
- 4D. Write briefly on colour blindness.
(3 marks)
- 4E. Ionic basis for action potential in a skeletal muscle and ventricular muscle.
(3 marks)
- 4F. Thalamic syndrome.
(3 marks)





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FIRST MBBS DEGREE EXAMINATION – AUGUST 2009

SUBJECT: PHYSIOLOGY – PAPER II (ESSAY)

Friday, August 14, 2009

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

1. Enumerate any six differences between I and II heart sounds. How do you record heart sounds? Explain the neural control of cardiovascular system.

(3+1+6 = 10 marks)
2. Enumerate the functions of upper respiratory tract and explain any two of them.

(2+4 = 6 marks)
3. Explain how plasma proteins help to prevent oedema. Enumerate any two functions of lymph.

(5+1 = 6 marks)
- 4A. Compare the renal reabsorption of water in the proximal and distal parts of the nephron.

(3 marks)
- 4B. Define/explain the term 'filtration fraction'. Give its normal value. How is it affected in hypotension?

(1+1+1 = 3 marks)
- 4C. Briefly describe the functions of colon.

(3 marks)
- 4D. Mention any three physiological functions of hydrochloric acid. Write briefly on fat absorption.

(1½+1½ = 3 marks)
- 4E. List five factors maintaining arterial blood pressure. What is 'adrenaline apnea'?

(2½+½ = 3 marks)
- 4F. What is the importance of the following on cardiovascular system functions.
 - i) A-V nodal delay
 - ii) Purkinje fibers having fastest velocity of impulse conduction
 - iii) Windkessel effect

(1+1+1 = 3 marks)

