

MANIPAL UNIVERSITY

FIRST MBBS DEGREE EXAMINATION – MAY/JUNE 2009

SUBJECT: PHYSIOLOGY– PAPER I (ESSAY)

Thursday, May 28, 2009

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

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- ✍ **All questions are compulsory .Write brief, clear and legible answers.**
- ✍ **Illustrate your answers with diagrams and flow charts wherever appropriate.**

1. Name four ascending tracts of the spinal cord. Describe a labeled diagram to show the pathway for pain from trunk. Add a note on referred pain.
(2+6+2 = 10 marks)

2. Describe the physiological actions and control of secretion of growth hormone. Explain the consequences of hypo secretion before puberty.
(2+2+2 = 6 marks)

3. Name the different theories of hearing. Explain the travelling wave theory of hearing in detail.
(2+4 = 6 marks)

- 4A. List the steps in neuromuscular transmission in skeletal muscle. Name two neuromuscular blockers.
- 4B. What is dark adaptation? Draw a dark adaptation curve.
- 4C. Name one hypercalcemic hormone and explain its hypercalcemic action.
- 4D. Describe foetoplacental unit with a diagram.
- 4E. Enumerate the functions of sertoli cells.
- 4F. What is EEG? Describe its various waves. What is alpha block?
(3×6 = 18 marks)

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FIRST MBBS DEGREE EXAMINATION – MAY/JUNE 2009

SUBJECT: PHYSIOLOGY– PAPER II (ESSAY)

Friday, May 29, 2009

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 40

1. Define 'Mean Arterial Pressure'. Describe its neural control.
(2+8 = 10 marks)

2. Describe 'Oxygen transport' from lung to the tissues. Add a note on 'Bohr Effect'.
(4+2 = 6 marks)

3. Define 'Glomerular Filtration Rate'. Mention the factors influencing it. Explain any one.
(1+3+2 = 6 marks)

- 4A. Explain the thermoregulatory changes that occur when a person is exposed to an environmental temperature of 40 Degree centigrade.
- 4B. Outline the regulation exocrine pancreatic secretion.
- 4C. Explain the role of loop of Henle in concentrating urine.
- 4D. Draw an ECG obtained from aVR lead. Explain the cause of its configuration.
- 4E. Compare the mechanism of reabsorption of sodium from PCT to that of DCT in a nephron.
- 4F. Explain the regulation of gastric secretion during 'gastric phase'.
(3×6 = 18 marks)