

Reg. No.

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: ANATOMY

Monday, June 07, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer all questions.**

✍ **Draw diagrams wherever necessary.**

1A. Name the parts of gastrointestinal system.

1B. Describe the position, parts, relations, blood supply and nerve supply of stomach.

(8+12 = 20 marks)

2A. Describe the features, blood supply and nerve supply of lateral wall of nasal cavity.

2B. Describe the different types of cartilages.

(10+10 = 20 marks)

3. Write briefly on:

3A. Neurons

3B. Ureter

3C. Spermatic cord

3D. Ovary

3E. Pituitary gland

(5×5 = 25 marks)

4. Write short notes on:

4A. Pericardium.

4B. Meninges of spinal cord.

4C. Middle ear.

4D. Cerebellum.

4E. Maxillary air sinus.

(3×5 = 15 marks)



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DEGREE EXAMINATION – JUNE 2010

SUBJECT: PHYSIOLOGY

Wednesday, June 09, 2010

Time: 10.00-13.00 Hours.

Max. Marks: 80

✍ **Answer all questions.**

1. Draw a labelled diagram of neuromuscular junction. Write the sequence of events of neuromuscular transmission
(10 marks)

2. Describe the actions of thyroid hormones. Add a note on Cretinism
(10 marks)

3. Write short notes on the following:
 - 3A. Facilitated diffusion.
 - 3B. ABO system of blood grouping.
 - 3C. Stages of deglutition.
 - 3D. Functions of cerebrospinal fluid.
 - 3E. Baroreceptor role in regulation of blood pressure.
 - 3F. Oxygen transport.
 - 3G. Functions of kidney.
 - 3H. Functions of placenta.(5×8 = 40 marks)

4. Write brief answers to the following questions:
 - 4A. List the functions of rods and cones.
 - 4B. Give the cause for each of the following conditions:
 - i) Cushing's syndrome
 - ii) Diabetes mellitus
 - 4C. Mention two actions of estrogen.
 - 4D. What is neutrophilia? Give one condition for it.
 - 4E. Mention any two sensations carried by the dorsal column tract.
 - 4F. Define hypoxia. Give one cause for it.
 - 4G. Define blood pressure. Give its normal value.
 - 4H. Enumerate the functions of liver.
 - 4I. Define glomerular filtration rate. Give its normal value.
 - 4J. Name the muscle proteins that have a role in contraction.(2×10 = 20 marks)



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FIRST YEAR B.Sc. M.R.T. DEGREE EXAMINATION – JUNE 2010

**SUBJECT: A : GENERAL AND APPLIED PATHOLOGY
B : RADIOBIOLOGY**

Friday, June 11, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer section A and section B in TWO separate answer books.

SECTION – A : GENERAL AND APPLIED PATHOLOGY (40 MARKS)

✍ Answer all the questions.

1. Major questions:

- 1A. Classify thyroid tumors. Briefly write on four major types of thyroid tumors. (4+6 = 10 marks)
- 1B. List the different subtypes of skin cancers. Add a note on the morphology of basal cell carcinoma. (5+5 = 10 marks)

2. Short notes:

- 2A. What are the risk factors for development of breast cancer. (5 marks)
- 2B. Write the staging of ca cervix. (5 marks)
- 2C. Define metastasis. What are the essential steps in the spread of a cancer? (1+4 = 5 marks)
- 2D. Risk factors in tumors of the urinary bladder. Write on the most common type of bladder tumor? (3+2 = 5 marks)

SECTION – B : RADIOBIOLOGY (40 MARKS)

3. Answer following questions:

- 3A. Discuss the consequences of radiation exposure to central nervous system (CNS).
- 3B. What are the effects of radiation on embryo?
- 3C. Add a note on the radiosensitivity of cells at various phases of the cell cycle.
- 3D. Briefly discuss radiation induced chromosomal aberration. (5×4 = 20 marks)

4. Answer following questions:

- 4A. Describe the following with reference to DNA repair:
i) Base Excision Repair ii) Nucleotide excision Repair.
- 4B. Describe various types of interaction of radiation with matter. (10×2 = 20 marks)

