

MANIPAL UNIVERSITY
FIRST YEAR B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./B.Sc.C.V.T.
DEGREE EXAMINATION – MAY 2009

SUBJECT: ANATOMY

Monday, May 18, 2009

Time: 10.00-11.30 Hrs.

Max. Marks: 40

1. List the parts of female reproductive system. Describe the position, parts, relations and blood supply of the uterus.

(2+1+2+2+1 = 8 marks)

2. Explain the arterial supply and venous drainage of the heart.

(4+4 = 8 marks)

3. Answer briefly on:
 - 3A. Skeletal muscle.
 - 3B. Nasal septum.
 - 3C. Superior vena cava.
 - 3D. Nerve supply of tongue.
 - 3E. Ureter.
 - 3F. Right suprarenal gland.
 - 3G. Cerebrospinal fluid.
 - 3H. Corpus callosum.

(3×8 = 24 marks)



Reg. No.

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.I.T./ B.Sc.C.V.T. DEGREE EXAMINATION – MAY 2009

SUBJECT: PHYSIOLOGY

Tuesday, May 19, 2009

Time: 10.00-11.30 Hrs.

Max. Marks: 40

1. Essay questions:

- 1A. What is Landsteiner's Law? Explain its application in ABO and Rh system.
- 1B. Describe the events in the second phase of deglutition.
- 1C. Describe the mechanism of skeletal muscle contraction.
- 1D. Describe the regulation of thyroid hormone secretion.

(5×4 = 20 marks)

2. Write short answer for the following:

- 2A. List four functions of WBCs.
- 2B. Draw a labeled diagram of the nerve action potential.
- 2C. Name four different types of transport mechanism across the cell membrane.
- 2D. Define refractory period. Mention its significance in cardiac muscle.
- 2E. Define hypoxia. Name different types of hypoxia.
- 2F. Name different types of intestinal movement and mention their significance.
- 2G. Write four features of acromegaly.
- 2H. Name two tests used to detect the day of ovulation.
- 2I. Name any two sensory tracts and the sensations carried by them.
- 2J. Write four functions of hypothalamus.

(2×10 = 20 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.P.T./B.O.T/ B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc.C.V.T
DEGREE EXAMINATION – MAY 2009

SUBJECT: BIOCHEMISTRY
(NEW REGULATIONS)

Wednesday, May 20, 2009

Time: 10.00-11.30 Hours

Max. Marks: 40

1. Explain the β -oxidation of palmitic acid. Add note on its energetic. (5+2 = 7 marks)
2. Describe the pathway of urea synthesis. Mention the disorders of urea cycle with defect. (4+2 = 6 marks)
3. Give an account of glycogen metabolism. (3+3 = 6 marks)
4. Discuss protein energy malnutrition in detail. (7 marks)
5. Explain how substrate concentration affects enzyme activity. (4 marks)
6. Write the steps involved in the activation of vitamin D in the body. (3 marks)
7. Write note on Dietary Fibers. (3 marks)
8. Explain Essential fatty acids under the following Definition, examples and functions. ($\frac{1}{2}+1+2\frac{1}{2} = 4$ marks)



Reg. No.														
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.I.T. DEGREE EXAMINATION – MAY 2009

SUBJECT: RADIATION PHYSICS

Thursday, May 21, 2009

Time: 10.00-13.00 Hrs.

Max. Marks: 80

-
- ✍ **Answer all questions.**
 - ✍ **Each question carries equal marks.**

1. Write a note on the following:
 - 1A. Image intensifier.
 - 1B. Heal effect and its application in diagnostic radiology.
2. Explain the process of x-ray generation and its type with diagram.
3. Write short notes on the following:
 - 3A. Properties of x-ray.
 - 3B. Stationary Grid.
4. Write detail notes on radiation monitoring devices.
5. How radiation effects are classified? What are the concepts of justification of practice and ALARA in medical imaging?



Reg. No.

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.I.T. DEGREE EXAMINATION – MAY 2009

SUBJECT: DARK ROOM TECHNIQUES

Friday, May 22, 2009

Time: 10.00-13.00 Hrs.

Max. Marks: 80

✍ **Answer all the questions.**

✍ **Each question carries 16 marks.**

1. Mention the work flow in an automatic processor and chemicals used in detail.
2. Describe the location and construction of a darkroom.
3. Describe the H and D curve in detail.
4. Draw and explain a single coated film. Write a note on different types of films available.
5. Write short note on the following:
 - 5A. Alkalinity, acidity and pH
 - 5B. Silver halide
 - 5C. Safe light filter
 - 5D. Contrast of an image.

