

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. R.R.T & D.T. DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: BDT 101: ANATOMY

Tuesday, May 28, 2013

Time: 10.00-11.30 Hrs.

Max. Marks: 40

✍ Answer ALL the questions.

1. Describe the lobes and functional areas of cerebral hemisphere.

(2+6 = 8 marks)

2. Describe the position, lobes, surfaces, relations, blood supply and nerve supply of liver.

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

3. Write briefly on:

3A. Ureter

3B. Spermatic cord

3C. Breast

3D. Cartilage

3E. Thoraco-abdominal diaphragm

3F. Retina

3G. Superior vena cava

3H. Pituitary gland

(3×8 = 24 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.Sc. RRT & DT DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: BDT 102: PHYSIOLOGY

Thursday, May 30, 2013

Time: 10.00-11.30 Hours.

Max. Marks: 40

✍ **Answer ALL questions. Draw diagrams wherever necessary.**

1. Essay questions:

- 1A. Classify leucocytes. Mention one function of each.
- 1B. Draw a neat labeled diagram of the visual pathway.
- 1C. Mention the site of formation and circulation of cerebrospinal fluid. List any two functions of cerebrospinal fluid.
- 1D. List five actions of cortisol.

(5×4 = 20 marks)

2. Write short answers for the following:

- 2A. Mention any two transport mechanisms across the cell membrane.
- 2B. Mention any two differences between the first and second heart sounds.
- 2C. Enumerate any two differences between skeletal and smooth muscles.
- 2D. Mention any two anticoagulants.
- 2E. Define stroke volume. Give its normal value.
- 2F. Mention the different forms in which oxygen is transported in the blood.
- 2G. List any two functions of liver.
- 2H. Define alveolar ventilation. Mention its normal value.
- 2I. List any two functions of placenta.
- 2J. Define renal threshold. Mention the renal threshold for glucose.

(2×10 = 20 marks)



MANIPAL UNIVERSITY
FIRST YEAR B.Sc. RRT & DT DEGREE EXAMINATION – MAY/JUNE 2013
SUBJECT: BDT 103: BIOCHEMISTRY

Saturday, June 01, 2013

Time: 10.00-11.30 Hours

Max. Marks: 40

1. Write in detail the reactions of urea cycle. Add a note on two disorders of urea cycle.
(8 marks)

2. Explain the metabolism of ketone bodies.
(6 marks)

3. **Write short notes on the following:**
 - 3A. Structure of DNA
 - 3B. Secondary structure of proteins
 - 3C. Digestion of starch
 - 3D. Reactions of β -oxidation of palmitic acid in mitochondria
(4×4 = 16 marks)

4. **Answer the following:**
 - 4A. Give two functions of dietary fibers.
 - 4B. Name two important products each derived from tyrosine and glycine.
 - 4C. List four functions of calcium.
 - 4D. Write the normal serum levels of total protein, uric acid, creatinine and total cholesterol.
 - 4E. What are proenzymes? Give two examples.
(2×5 = 10 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.Sc. RRT & DT DEGREE EXAMINATION – MAY/JUNE 2013****SUBJECT: BDT 104 – OVERVIEW OF RENAL FAILURE AND BASICS OF DIALYSIS THERAPY, RENAL REPLACEMENT THERAPY**

Tuesday, June 04, 2013

Time: 10.00-13.00 Hrs.

Max. Marks: 80

1. Long essay questions:

- 1A. Describe the gross anatomy of the urinary tract.
- 1B. Define AKI. Classify AKI as per RIFLE criteria.
- 1C. Describe a standard water treatment plant for hemodialysis.

(10×3 = 30 marks)

2. Short essay questions:

- 2A. How is water distributed in the body?
- 2B. What are the types of AVF? What are the complications of AVF?
- 2C. Illustrate the clotting pathway. What is its importance in hemodialysis?
- 2D. What are the modes of renal replacement therapy?
- 2E. What are the mechanisms of solute transfer in peritoneal dialysis?
- 2F. What are the functions of the kidney?

(5×6 = 30 marks)

3. Write short notes on:

- 3A. List the renal hormones.
- 3B. What are the salient signs of sepsis in a dialysis patient?
- 3C. What are the stages of hypertension?
- 3D. What is innate immunity?
- 3E. What is deceased donor renal transplantation?
- 3F. List the actions of vitamin D.
- 3G. What are the complications of hemodialysis catheter insertion?
- 3H. What is eGFR?
- 3I. Name two complications of peritoneal dialysis.
- 3J. Mention four complications of CKD.

(2×10 = 20 marks)

