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MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.L.T./B.Sc. R.T./B.Sc. M.R.T./B.Sc. M.I.T./B.Sc. C.V.T./
B.Sc. R.R.T & D.T. DEGREE EXAMINATION – AUGUST 2015

SUBJECT: ANATOMY

Wednesday, August 26, 2015

Time: 10.00 – 11.30 Hrs.

Max. Marks: 40

✍ Answer ALL the questions.

1. Name the components (parts) of female reproductive system. Describe the position, parts, relations, blood supply and lymphatic drainage of uterus.

(2+8 = 10 marks)

2. Write short notes on:

2A. Classification and structure of bones

2B. Lungs

2C. Aorta

2D. Anal canal

2E. Pituitary gland

2F. Lobes and functional areas of cerebral hemisphere

(5 marks × 6 = 30 marks)



MANIPAL UNIVERSITY

FIRST YEAR BOT / B.Sc. MLT / B.Sc. CVT / B.Sc. MIT / B.Sc. RT / B.Sc. NMT /
B.Sc. RRT & DT / B.Sc. MRT / DEGREE EXAMINATION – AUGUST 2015

SUBJECT: PHYSIOLOGY

Thursday, August 27, 2015

Time: 10.00 – 11.30 Hours.

Max. Marks: 40

✍ Answer ALL questions. Draw diagrams and flow chart wherever appropriate.

1. Essay Questions:

- 1A. Explain the intrinsic mechanism of blood clotting.
- 1B. Draw and label a normal electrocardiogram from limb lead II and mention the causes for each wave.
- 1C. Mention any three functions of cerebellum. List any two features of cerebellar lesion.
- 1D. List four actions of thyroid hormones. Name the condition that results due to deficiency of thyroid hormones in adults.

(5 marks × 4 = 20 marks)

2. Short Answer Questions:

- 2A. Describe rigor mortis
- 2B. Describe primary active transport mechanism with an example
- 2C. List two features of erythroblastosis fetalis
- 2D. What are the two different forms of carbon dioxide transport in blood?
- 2E. Define cardiac output. Mention its normal value
- 2F. Name the components of vestibular apparatus
- 2G. List any two functions of liver
- 2H. Mention any two actions of testosterone
- 2I. Define glomerular filtration rate. Give its normal value
- 2J. Mention two properties of sensory receptors

(2 marks × 10 = 20 marks)



MANIPAL UNIVERSITY

FIRST YEAR BPT / BOT / B.Sc. MLT / B.Sc. RT / B.Sc. MIT / B.Sc. CVT /
B.Sc. RRT & DT DEGREE EXAMINATION – AUGUST 2015

SUBJECT: BIOCHEMISTRY

Friday, August 28, 2015

Time: 10.00 – 11.30 Hours

Max. Marks: 40

✍ Answer ALL the questions.

✍ Draw diagrams and flow charts wherever appropriate.

1. Explain the oxidation of acetyl CoA in the TCA cycle and add a note on its energetics. (8 marks)

2. Give a detailed account of the process of emulsification and absorption of lipids in the intestine. (6 marks)

3. Write short notes on the following:

3A. Classification of lipoproteins based on density and their functions

3B. Ketolysis and its significance

3C. Basal metabolic rate

3D. Differences between DNA and RNA

(4 marks × 4 = 16 marks)

4. Write brief answers for the following:

4A. Give the Henderson- Hasselbalch equation of bicarbonate buffer system with normal values of the components.

4B. Give normal serum level of calcium and mention THREE hormones involved in its regulation.

4C. Define essential amino acids with THREE examples.

4D. Classify polysaccharides giving ONE example each.

4E. Describe the effect of temperature on enzyme activity with a suitable graph.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.Sc. RRT & DT DEGREE EXAMINATION – AUGUST 2015**
SUBJECT: BDT 104 – OVERVIEW OF RENAL FAILURE AND BASICS OF DIALYSIS
THERAPY, RENAL REPLACEMENT THERAPY

Saturday, August 29, 2015

Time: 10.00 – 13.00 Hrs.

Max. Marks: 80

1. Long Essay Questions:

- 1A. What is glomerular filtration rate? Describe the methods used to measure glomerular filtration rate.
- 1B. Describe the process of water treatment for hemodialysis.
- 1C. Define immunity. Explain the types of immunity.

(10 marks × 3 = 30 marks)

2. Short essay questions:

- 2A. Define and classify acute kidney injury.
- 2B. Write a note on urinalysis.
- 2C. What are the complications of erythropoietin therapy and how is treatment monitored?
- 2D. List the functions of the normal kidney.
- 2E. Describe immunity and discuss the types of immunity.
- 2F. What are the types of renal transplant? Briefly describe each type.

(5 marks × 6 = 30 marks)

3. Short notes questions:

- 3A. What are the renal hormones?
- 3B. List the components of the urinary system
- 3C. Name four causes of anemia in the HD patient
- 3D. What is osmosis?
- 3E. What is the normal serum osmolality and how is it maintained?
- 3F. What is plasmapheresis?
- 3G. Name four side effects of heparin
- 3H. Define diffusion
- 3I. Name four complications of renal transplantation
- 3J. Define antigen and antibody

(2 marks × 10 = 20 marks)

