



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - AUG/SEPT 2018
SUBJECT: BCVT 102 - ADVANCED ECG & HOLTER MONITORING
(2016 RV SCHEME)

Monday, August 27, 2018 (10.00 - 12.00)

Answer all the questions.

Draw the diagram wherever necessary.

Marks: 50

Duration: 120 mins.

- 1) Classify tachy-arrhythmias; discuss the different mechanisms of arrhythmias. (10)
- 2) Explain the indications, lead system and interpretation of HOLTER. (10)

- 3A) Write a note on pitfalls in ECG interpretation. (5)
- 3B) Describe Brugada syndrome briefly. (5)
- 3C) Write a note on VT in structurally normal and abnormal heart. (5)
- 3D) Write a note on AVNRT, and explain its types. (5)

- 4A) Write the ECG findings in MAT. (2)
- 4B) What are torsade de pointes? (2)
- 4C) Write the indications for signal averaged ECG. (2)
- 4D) Define sick sinus syndrome with an example. (2)
- 4E) Enumerate the ECG changes of PTE. (2)

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SECOND SEMESTER BPT / B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT / BOPT / B.O.T./ B.Sc.
M.L.T. DEGREE EXAMINATION - AUG/SEPT 2018

SUBJECT : BIOCHEMISTRY / GENERAL BIOCHEMISTRY

(BIOC 102/BPT 106; BIOC 102; BIOC 102/BRES 108; BIOC 102/BMIT 106; BIOC 102; BIOC 102/BMLT
104)

(2016 RV & 2016 SCHEME)

Friday, August 31, 2018 (10.00 - 12.00)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

- 1) Describe the structure and synthesis of mature collagen with the help of suitable diagrams. (10)
- 2A) Describe transamination and oxidative deamination of amino acids with examples. (4)
- 2B) Explain in detail the reactions involved in the urea cycle mentioning the site and subcellular site. (6)

3) Answer the following:

- 3A) Write the reactions of synthesis of TAG. Mention the fate of TAG in liver and adipose tissue (5)
- 3B) Define emulsification and explain the process of absorption of lipids in the intestine with a suitable diagram. (5)
- 3C) Explain FIVE factors affecting basal metabolic rate. (5)
- 3D) What are dietary fibers? Explain FOUR beneficial effects of dietary fibers. (5)

4) Answer the following:

- 4A) What is a ketogenic amino acid? Give **TWO** examples (2)
- 4B) What are essential fatty acids? Give **TWO** examples. (2)
- 4C) Define endopeptidases and exopeptidases with ONE example for each. (2)
- 4D) Mention **TWO** functions of calcium (2)
- 4E) Define oxidative phosphorylation and mention **TWO** inhibitors of this process. (2)

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SECOND SEMESTER BPT/ B.Sc. MRT/B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. MIT/ B.Sc. RRT & DT/ BOPT/ BOT/
B.Sc. E.S.S./ B.Sc. MLT DEGREE EXAMINATION - AUG/SEPT 2018

SUBJECT: PHYSIOLOGY - II

(PHYS 102/BPT 104; BMRT 102; PHYS 102; PHYS 102/BMIT 104; PHYS 102; PHYS 102/BOPT 102;
PHYS 102)

(2016 RV & 2016 SCHEME)

Wednesday, August 29, 2018 (10.00 - 12.00 Hrs.)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

- 1A) With the help of a diagram describe the mechanism of gastric acid secretion. (5)
- 1B) Describe the different types of movements of small intestine. (5)
- 2A) Describe the regulation of thyroid hormone secretion in the form of a flow chart. (5)
- 2B) Mention any five actions of thyroid hormone. (5)
- 3A) Explain the actions of testosterone (5)
- 3B) Define glomerular filtration rate. Give its normal value. Mention three factors affecting GFR. (5)
- 3C) List two functions of Basal Ganglia. Give the cause and list any two clinical features of Parkinson's disease. (5)
- 3D) Mention the site of formation, absorption and three functions of cerebrospinal fluid. (5)
- 4A) List any two functions of saliva (2)
- 4B) List any two actions of cortisol. (2)
- 4C) Mention any two functions of kidney (2)
- 4D) List any two properties of synapses. (2)
- 4E) List any two functions of thalamus. (2)

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