

Question Paper

Exam Date & Time: 11-Sep-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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./ B.Sc.
P.F.T. DEGREE EXAMINATION - SEPTEMBER 2019
SUBJECT : BIOCHEMISTRY (BIOC 102/BPT 106)
(2016 RV SCHEME/2016 SCHEME)
Wednesday, September 11, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Write in detail the steps of TCA cycle. (8)
- 1B) Add a note on its energetics. (2)
- 2A) Describe the process of emulsification and lipid digestion in detail. (6)
- 2B) Diagrammatically represent lipid absorption in the intestine. (4)
- 3) **Answer the following:**
- 3A) Describe in detail the synthesis of triacylglycerol. Add a note on its fate in liver and adipose tissue. (5)
- 3B) Write the reactions of urea cycle. (5)
- 3C) Name the lipoproteins and mention one function for each. Draw the electrophoretic separation pattern for serum lipoproteins. (5)
- 3D) What are dietary fibers? Explain their significance in diet. (5)
- 4) **Answer the following:**
- 4A) Name the coenzyme form of vitamin B₁ and write one reaction where it is required. (2)
- 4B) Define and classify nitrogen balance. (2)
- 4C) Mention two functions of vitamin D. (2)
- 4D) What are essential fatty acids? Give two examples. (2)
- 4E) Give the normal range for fasting blood glucose and serum cholesterol. (2)

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Question Paper

Exam Date & Time: 12-Sep-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - SEPTEMBER 2019
SUBJECT: BRES 102 - CLINICAL EXAMINATION IN RESPIRATORY CARE
(2016 RV SCHEME)
Thursday, September 12, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

1) Draw a Normal Spirogram. Explain the lung volumes and capacities. (10)
(4+6 = 10 marks)

2) Techniques of physical examination in neonates. (10)

3) Write short notes on:

3A) Write briefly about obstructive sleep apnea. (5)

3B) Describe clubbing and cyanosis. (5)

3C) Complete blood count (5)

3D) Metabolic acidosis (5)

4) Write briefly on:

4A) Define: (2)

a) Orthopnea

b) Paroxysmal nocturnal dyspnea

4B) Principle of pulse oximetry (2)

4C) Mention two indications for flexible bronchoscopy. (2)

4D) Write any two indications for pulmonary function testing. (2)

4E) Define neutral thermal environment. (2)

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Question Paper

Exam Date & Time: 13-Sep-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

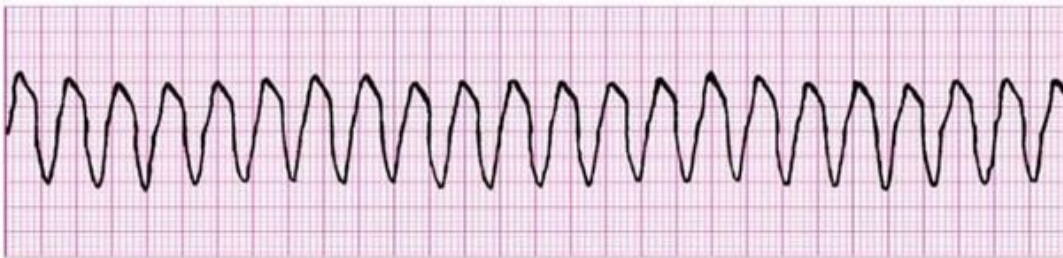
SECOND SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - SEPTEMBER 2019
SUBJECT: BRES 104 - CLINICAL ANATOMY AND PHYSIOLOGY FOR RESPIRATORY CARE
(2016 RV SCHEME)
Friday, September 13, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define Ventilation Perfusion Ratio. Explain the Ventilation Perfusion Ratio in different lung zones. (10)
(2+8 = 10 marks)
- 2) Explain briefly about the oxygen transport with a neat labelled diagram. Name the factors that shift the oxygen dissociation curve. (10)
(8+2 = 10 marks)
- 3A) Note on Standard limb lead system. (5)
- 3B) Short note on airway resistance. (5)
- 3C) Identify the rhythm and describe any four morphology of ECG. (5)



(1+4 = 5 marks)

- 3D) What is hemodynamic monitoring? Explain any one invasive hemodynamic monitoring system. (5)
(1+4 = 5 marks)
- 4A) Broadly classify acid base disorders. (2)
- 4B) Classification of hypoxia (2)
- 4C) Name the four types of alveolar cells. (2)
- 4D) Name any four cardiopulmonary disorders caused by renal failure. (2)
- 4E) Define Shunt and Dead Space. (2)

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Question Paper

Exam Date & Time: 10-Sep-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BPT/ B.Sc. MRT/ B.Sc. CVT/ B.Sc. R.T./ B.Sc. MIT/ B.Sc. RRT & DT/ BOT/ B.Sc. E.S.S./ B.Sc. MLT/
B. Sc. PFT/ DEGREE EXAMINATION - SEPTEMBER 2019
SUBJECT: PHYSIOLOGY - II
(PHYS 102 & BMRT 102)
(2016 RV & 2016 SCHEME)
Tuesday, September 10, 2019 (14.00 - 16.00 Hrs.)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Name the major subdivisions of cerebellum. Enumerate three functions of cerebellum. (5)
- 1B) List any five clinical features seen in cerebellar lesions. (5)
- 2A) Name the hormones of thyroid gland and mention any five physiological actions of thyroid hormones. (5)
- 2B) Mention the cause and four clinical features seen in myxedema. (5)
- 3A) Describe glucose reabsorption in the renal tubules. (5)
- 3B) Explain the actions of testosterone. (5)
- 3C) Describe the events in the second phase of deglutition. (5)
- 3D) Mention the site of formation and functions of CSF. (5)
- 4A) Mention any two clinical features observed in lower motor neuron lesion. (2)
- 4B) Define GFR. Mention its normal value. (2)
- 4C) Enumerate any two functions of placenta. (2)
- 4D) List the small intestinal movements. (2)
- 4E) Mention any two features of Cushing syndrome. (2)

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Question Paper

Exam Date & Time: 05-Sep-2019 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BPT / B.Sc. C.V.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT / B.O.T./ B.Sc. E.S.S. DEGREE
EXAMINATION - SEPTEMBER 2019

SUBJECT : ANATOMY II

(ANAT 104; ANAT 102; ANAT 102/BRES 102; ANAT 102/BMIT 102; ANAT 102; ANAT 104; ANAT 102)

(2016 RV & 2016 SCHEME)

Thursday, September 05, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

1) Describe the hip joint under the following headings:

- | | | |
|-----|---|-----|
| 1A) | Articular surfaces | (2) |
| 1B) | Names of the ligaments | (3) |
| 1C) | Muscles producing each of its movements | (3) |
| 1D) | Applied anatomy | (2) |

Answer all the questions.

- | | | |
|-----|--|------|
| 2) | a) Describe the origin, insertion, nerve supply and actions of deltoid muscle.
b) Mention the applied anatomy of deltoid muscle.
c) Name any six structures lying deep to (under cover of) the deltoid muscle.
(2+1+1+2+1+3 = 10 marks) | (10) |
| 3A) | Gluteus medius muscle | (5) |
| 3B) | Ulnar nerve | (5) |
| 3C) | Hamstring muscles | (5) |
| 3D) | Brachial artery | (5) |
| 4A) | Vertebral column | (2) |
| 4B) | Carpal tunnel | (2) |
| 4C) | Serratus anterior muscle | (2) |
| 4D) | Posterior cord of brachial plexus | (2) |
| 4E) | Femoral nerve | (2) |

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