

Question Paper

Exam Date & Time: 11-Jan-2023 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. (ECHOCARDIOGRAPHY)/ M.Sc. CCIT DEGREE EXAMINATION - JANUARY 2023
SUBJECT: CVT6011 - HEART FAILURE DEVICES
(2021 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Elaborate the role of cardiac resynchronization therapy in the treatment of heart failure (20)
- 2) Discuss the types of ECMO devices (10)
- 3) Explain the basic principle of IABP counter pulsation and add a note on complications of the same (10)
- 4A) Explain the indications and contraindications for IABP insertion (5)
- 4B) What is the efficacy of combined CRT-ICD treatment of heart failure? (5)

-----End-----

Question Paper

Exam Date & Time: 05-Jan-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. (ECHOCARDIOGRAPHY / M.Sc. CCIT) DEGREE EXAMINATION - JANUARY 2023
SUBJECT: CVT6101 - HEART FAILURE
(2021 SCHEME)

Answer ALL questions.

Marks: 100

Duration: 180 mins.

- 1) Explain the diagnostic approach, goals of medical therapy and indications for heart transplantation in infants with heart failure. (20)
- 2) Explain the clinical examination to assess the hemodynamic state of patients with heart failure. (20)
- 3A) Discuss the development, progression and maladaptive changes in failing myocardial tissue. (10)
- 3B) Explain the progression of heart failure due to various etiology. (10)
- 3C) Explain the pathophysiology and clinical features in heart failure with preserved ejection fraction. (10)
- 3D) Explain the pathophysiology and goals of medical therapy in acute heart failure. (10)
- 4A) Explain contractility versus loading conditions in detail. (5)
- 4B) Elaborate on endomyocardial biopsy. (5)
- 4C) Explain the indications for mechanical circulatory support in heart failure. (5)
- 4D) Discuss on cardiopulmonary exercise testing. (5)

-----End-----