

Question Paper

Exam Date & Time: 18-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. ECHOCARDIOGRAPHY DEGREE EXAMINATION - APRIL 2022
SUBJECT: MECO 701 - CONGENITAL HEART DISEASE
(2018 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain the embryology, pathophysiology, classification and diagnosis of pulmonary atresia with intact ventricular septum. (20)
- 2) Explain the echocardiographic approach in the diagnosis of congenital heart diseases in brief. (20)
- 3A) Explain the clinical manifestations and evaluation of adult patients with tetralogy of Fallot. (10)
- 3B) Explain the clinical significance of right aortic arch in the vascular ring/sling anomalies. (10)
- 3C) Describe the prerequisites for Fotan's surgery for Univentricular repair briefly. (10)
- 3D) Explain the brief pathophysiology, clinical presentation and diagnosis of hemi-truncus anomaly. (10)
- 4A) Write a note on Uhl's anomaly. (5)
- 4B) Describe the coronary anomalies seen in CcTGA. (5)
- 4C) Write a note on MAPCAS. (5)
- 4D) Describe palliative shunts. (5)

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Question Paper

Exam Date & Time: 20-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. ECHOCARDIOGRAPHY / CARDIAC CATH AND INTERVENTION TECHNOLOGY DEGREE
EXAMINATION - APRIL 2022

SUBJECT: MECO 703/MCAT 703 - HEART FAILURE/CARDIAC CATH AND INTERVENTION IN HEART FAILURE
(2018 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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| 1) | Explain the brief pathophysiology and clinical evaluation of systolic heart failure. | (20) |
| 2) | Explain brief clinical evaluation of patients undergoing cardiac transplantation. | (20) |
| 3A) | Explain the physiology of cardiac cycle in brief. | (10) |
| 3B) | Explain brief pathophysiology associated with acute severe AR. | (10) |
| 3C) | Write a note on stem cell therapy. | (10) |
| 3D) | Explain role of stress echocardiography in the assessment of chronic heart failure patients. | (10) |
| 4A) | Enumerate the indications for biventricular pacing. | (5) |
| 4B) | Write a note on pulmonary vascular obstructive disease. | (5) |
| 4C) | Write a note on NYHA classification. | (5) |
| 4D) | Describe Pompe's disease. | (5) |

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Question Paper

Exam Date & Time: 22-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER M.Sc. ECHOCARDIOGRAPHY DEGREE EXAMINATION - APRIL 2022
SUBJECT: MECO 705 - CARDIAC PACEMAKERS AND DEFIBRILLATORS
(2018 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Explain the factors affecting loss of capture and loss of sensing in pacemaker function and its management strategies. | (20) |
| 2A) | Discuss the different pacing modes in permanent pacemaker implantation. | (10) |
| 2B) | Write the AHA guidelines for temporary pacemaker implantation. | (10) |
| 3A) | Write a note on mechanisms of left ventricular dys-synchrony. | (5) |
| 3B) | Discuss pacemaker timing cycles and intervals. | (5) |

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