

Question Paper

Exam Date & Time: 05-Jan-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - JANUARY 2021
SUBJECT: BCVT 301 - BASICS IN CARDIAC CATH AND HARDWARES
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|---|------|
| 1) | What are ionic and non ionic contrast agents and discuss about contrast induced nephropathy | (10) |
| 2) | Discuss the quantitative assessment of shunts by cardiac catheterization using different formulas | (10) |
| 3A) | Write a note on Green dye dilution method | (5) |
| 3B) | Discuss in details on embolic protection device | (5) |
| 3C) | Write a note on venous approach | (5) |
| 3D) | Write a note on x - ray tube with a labelled diagram | (5) |
| 4A) | Mention one advantage and disadvantages of VSD devices | (2) |
| 4B) | Define cross infection | (2) |
| 4C) | Define air kerma | (2) |
| 4D) | Differentiate between guiding and diagnostic catheters | (2) |
| 4E) | Mention the types of drugs used in drug eluting stents | (2) |

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Question Paper

Exam Date & Time: 07-Jan-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - JANUARY 2021
SUBJECT: BCVT 303 - MYOCARDIAL, PERICARDIAL AORTIC AND ISCHEMIC HEART DISEASES
(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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|-----|---|------|
| 1A) | Explain assessment of LV filling pressure in atrial fibrillation, sinus tachycardia and hypertrophic cardiomyopathy | (20) |
| 1B) | Explain assessment of ejection fraction by various methods | (20) |
| 2A) | Explain clinical findings and diagnostic modalities in CCP | (10) |
| 2B) | Describe various Indication of early invasive in acute coronary syndrome | (10) |
| 3A) | Explain assessment of LV filling pressure in atrial fibrillation | (5) |
| 3B) | Explain role of velocity propagation in diastolic dysfunction | (5) |
| 3C) | Write a short note on arrhythmogenic right ventricular dysplasia | (5) |
| 3D) | Explain differential diagnosis of prolonged chestpain | (5) |
| 3E) | Write a short note hypereosinophilic syndrome | (5) |
| 3F) | Explain rhabdomyoma | (5) |
| 4A) | Define chronic constrictive pericarditis | (2) |
| 4B) | Write different Causes of pericardial effusion | (2) |
| 4C) | Define Mc Connell sign | (2) |
| 4D) | Define Annulus paradoxus | (2) |
| 4E) | Write Non MI causes of troponin elevation | (2) |

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Question Paper

Exam Date & Time: 09-Jan-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - JANUARY 2021
SUBJECT: BCVT 305 - CONGENITAL HEART DISEASE II
(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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|-----|---|------|
| 1A) | Describe embryology, associated anomalies and clinical presentation of congenitally corrected TGA | (20) |
| 1B) | Describe classification and diagnosis of tricuspid atresia | (20) |
| 2A) | Describe echocardiographic evaluation of TOF | (10) |
| 2B) | Explain pathophysiology, Clinical presentation of RSOV | (10) |
| 3A) | Explain diagnosis of truncus arteriosus in brief | (6) |
| 3B) | Describe clinical findings and ECG changes associated with ALCAPA | (6) |
| 3C) | Describe the echocardiographic evaluation of interrupted aortic arch | (6) |
| 3D) | Describe Glenn shunt in detail | (6) |
| 3E) | Describe the management of DORV | (6) |
| 4A) | Define overriding | (2) |
| 4B) | Define admixture physiology | (2) |
| 4C) | Write the Xray findings in cardiomegaly | (2) |
| 4D) | Enumerate any two conditions with duct dependent pulmonary circulation | (2) |
| 4E) | Define RV dependent coronary circulation | (2) |

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Question Paper

Exam Date & Time: 12-Jan-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - JANUARY 2021
SUBJECT: BCVT 307 - VALVULAR HEART DISEASE
(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Describe clinical findings and echocardiographic evaluation of mitral stenosis. (20)
- 2) Explain clinical findings and echocardiographic diagnosis and severity assessment of mitral regurgitation. (20)
- 3) Explain clinical findings and echocardiographic severity assessment of aortic stenosis. (10)
- 4) Explain Dukes criteria in the diagnosis of infective endocarditis in detail. (10)
- 5A) Enumerate the echocardiographic differences between acute and chronic aortic regurgitation. (5)
- 5B) Enumerate the differences between organic and functional TR. (5)
- 5C) Describe the echocardiographic evaluation of prosthetic valve malfunction. (5)
- 5D) Enumerate the ACC/AHA indications for tricuspid valve replacement. (5)
- 5E) Write the pathophysiology of infective endocarditis in detail. (5)
- 5F) Describe the management of rheumatic fever. (5)
- 6A) Write the clinical features of chorea. (2)
- 6B) Write the continuity equation in the assessment of AS. (2)
- 6C) Write any two complications of BPV. (2)
- 6D) Enumerate any two differences between physiologic and pathologic mitral prosthetic valve regurgitation. (2)
- 6E) Define PISA formula. (2)

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