

# Question Paper

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



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BCVT 301 - BASICS IN CARDIAC CATH AND HARDWARES

(2016 SCHEME)

Thursday, December 12, 2019 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Explain the different manufacturing designs and modules in stents. (10)
- 2) Discuss on ionic and non-ionic contrast agents and its therapeutic uses. (10)
- 3A) Systemic vascular resistance (5)
- 3B) Write a note on steroids. (5)
- 3C) Discuss the types of embolic protection devices. (5)
- 3D) Write the ACC/AHA indications for coronary angiogram. (5)
- 4A) Define Air kerma. (2)
- 4B) Draw a labelled diagram of image intensifier. (2)
- 4C) Mention the drugs used in drug eluting stents. (2)
- 4D) Properties of CTO wires. (2)
- 4E) Define fumigation principles. (2)

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# Question Paper

Exam Date & Time: 13-Dec-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019 SUBJECT: BCVT 303 -  
MYOCARDIAL, PERICARDIAL AORTIC AND ISCHEMIC HEART DISEASES (2016 SCHEME)

Friday, December 13, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

### Answer all the questions.

- 1A) Explain hemodynamic, clinical findings and diagnostic modalities in pericardial tamponade. (20)
- 1B) Explain diagnosis of LV diastolic dysfunction in subject with depressed ejection fraction. (20)
- 2A) Describe various diagnostic modalities for assessing ACS. (10)
- 2B) Explain endomyocardial fibrosis. (10)
- 3A) Explain role of Valsalva maneuver in assessing in diastolic dysfunction. (5)
- 3B) Write a short note on amyloidosis. (5)
- 3C) Write role of color m- mode in assessing diastolic dysfunction. (5)
- 3D) Explain assessment of LV filling pressure in MS. (5)
- 3E) Explain GpIIb/IIIa inhibitor. (5)
- 3F) Explain various echo findings in ARVD. (5)
- 4A) Define stunned myocardium. (2)
- 4B) What is Phlebotomy? (2)
- 4C) Write Cardiac causes of diastolic dysfunction. (2)
- 4D) Mention two Roles of platelets in ACS. (2)
- 4E) Define Annular reverses. (2)

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# Question Paper

Exam Date & Time: 14-Dec-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BCVT 305 - CONGENITAL HEART DISEASES - II

(2016 SCHEME)

Saturday, December 14, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

### Answer all the questions.

- 1) Explain Embryology, Pathophysiology, ECG and Xray findings of complete transposition of great arteries. (20)  
Explain embryological basis, pathophysiology, adult clinical presentation of CoA.
- 2) Explain pathophysiology, Clinical presentation of RSOV. (20)
- 3) Explain pathophysiology and classification of pulmonary atresia with intact ventricular septum. (10)
- 4) Explain the embryology and components of TOF. (10)
- 5A) Describe the ECG and Xray findings of CcTGA. (5)
- 5B) Describe Potts shunting in detail. (5)
- 5C) Describe echocardiographic evaluation of truncus arteriosus in brief. (5)
- 5D) Explain the coronary anomalies associated with TOF and TGA. (5)
- 5E) Describe clinical findings and ECG changes associated with ALCAPA. (5)
- 5F) Write the Xray findings in CoA. (5)
- 6A) Write the ECG findings in TOF. (2)
- 6B) Enumerate any two conditions with duct dependent pulmonary circulation. (2)
- 6C) Define obligatory shunting. (2)
- 6D) Define RV dependent coronary circulation. (2)
- 6E) (2)

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# Question Paper

Exam Date & Time: 16-Dec-2019 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2019

SUBJECT: BCVT 307 - VALVULAR HEART DISEASE

(2016 SCHEME)

Monday, December 16, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

### Answer all the questions.

- 1) Describe indications, detailed procedure and complications of BMV. (20)
- 2) Describe pathophysiology, Clinical presentation, ECG and Echo findings of aortic stenosis. (20)
- 3) Explain Jones criteria in the diagnosis of rheumatic fever. (10)
- 4) Explain pathophysiology and clinical findings in acute severe mitral regurgitation. (10)
- 5A) Enumerate the differences between organic and functional TR. (5)
- 5B) Explain the pathophysiology of acute severe aortic regurgitation. (5)
- 5C) Describe the pathophysiology and clinical findings of pulmonary stenosis. (5)
- 5D) Describe complications of infective endocarditis. (5)
- 5E) Enumerate the ACC/AHA indications for mitral valve replacement in mitral stenosis. (5)
- 5F) Describe the severity assessment of mitral stenosis by echocardiography. (5)
- 6A) What is Ross procedure? (2)
- 6B) Write any two limitations of PHT. (2)
- 6C) Define aliasing. (2)
- 6D) Write the uses of colour m-mode in aortic regurgitation. (2)
- 6E) Enumerate any two differences between physiologic and pathologic mitral prosthetic valve regurgitation. (2)

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