Question Paper

Exam Date & Time: 19-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER BSc CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION-JUNE 2024
SUBJECT: CVT3101- BASICS IN CARDIAC CATH AND HARDWARES
(SCHEME 2020)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain the indications, contraindications and techniques of performing Left heart catheterization and add a note on pressure tracings of left heart.	(20)
2)	Explain the process of image formation in cathlab with a help of neat labelled diagrams.	(20)
3)	Analyze the right heart chamber pressure waveform through a labeled diagram and discuss the abnormal waveforms associated with different diseased conditions.	(10)
4)	List ACC/AHA guidelines for performing coronary angiography.	(10)
5A)	Explain stenotic valve orifice area calculation using Gorlin's formula.	(5)
5B)	Categorize coronary guidewires based on their characteristics and intend to use.	(5)
5C)	Outline the role of vasodilators and give examples.	(5)
5D)	List the pitfalls of Fick's and thermodilution method.	(5)
5E)	Explain the cut down approach used in access site.	(5)
5F)	Construct the strategies to limit the radiation exposure in cathlab.	(5)
6A)	Draw a neat labelled diagram of X-ray image intensifier.	(2)
6B)	List the standard views used for coronary angiogram.	(2)
6C)	Define a pressure wave and Damping.	(2)
6D)	Classify antiplatelet drugs.	(2)
6E)	Define TIDS.	(2)

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Question Paper

Exam Date & Time: 21-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER BSc CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION-JUNE 2024
SUBJECT: CVT3102- MISCELLANEOUS CARDIOVASCULAR DISEASES
(SCHEME 2020)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain the pathophysiology, clinical features, echocardiographic assessment and complications of diabetes.	(20)
2)	Explain causes, pathogenesis and cardiovascular manifestations in Kawasaki disease.	(20)
3)	Explain structural and functional changes secondary to gaint cell arteritis by ECG and 2D echocardiography.	(10)
4)	Discuss the classification and pathophysiology of hemochromatosis.	(10)
5A)	Explain the underlying pathophysiology of cardiac involvement in scleroderma.	(5)
5B)	Explain echocardiographic assessment of pulmonary hypertension.	(5)
5C)	Outline the cardiovascular manifestations in Marfan's syndrome.	(5)
5D)	Explain assessment of cardiac function in muscular dystrophy.	(5)
5E)	Summarize the echocardiographic manifestations in patients with cardiac sarcoidosis.	(5)
5F)	Explain the cardiovascular complications in sickle cell anemia patients.	(5)
6A)	Define systemic hypertension and hypertensive crisis.	(2)
6B)	Why does carcinoid heart disease affect right heart? Justify.	(2)
6C)	List the complications of cardiac trauma.	(2)
6D)	Explain HIV associated cardiomyopathy.	(2)
6E)	List the complications of overt hypothyroidism.	(2)

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Question Paper

Exam Date & Time: 20-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER BSc CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION-JUNE 2024
SUBJECT: CVT3103- CONGENITAL HEART DISEASE II
(SCHEME 2020)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Explain the embryology, pathophysiology, clinical presentation, diagnosis and management in TOF with pulmonary atresia.	(20)
2)	Elaborate the pathology, clinical manifestations, ECG findings -ray findings and Echo findings in tricuspid atresia.	(20)
3)	Discuss the clinical presentation, diagnosis and management in RSOV.	(10)
4)	Explain pathophysiology, classification and echocardiographic findings in CCTGA.	(10)
5A)	Summarize on Glenn shunt and Hemi-Fontan procedure.	(5)
5B)	Discuss on TET spells and its management.	(5)
5C)	Explain the classification of coronary anomalies.	(5)
5D)	Illustrate the management in Fallot type and Taussig-Bing type of DORV.	(5)
5E)	Outline the management in HLHS.	(5)
5F)	Define right aortic arch and its variants.	(5)
6A)	Classification of double inlet LV.	(2)
6B)	Outline the X-ray findings in TOF.	(2)
6C)	List any two examples each for duct dependent systemic and pulmonary circulation.	(2)
6D)	Define Shone's complex.	(2)
6E)	Classification of AP window.	(2)

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Question Paper

Exam Date & Time: 21-Jun-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER BSc CARDIOVASCULAR TECHNOLOGY DEGREE EXAMINATION-JUNE 2024
SUBJECT: CVT3104- VALVULAR HEART DISEASE
(SCHEME 2020)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1)	Elaborate the various causes , pathophysiology, clinical manifestations and diagnostic criteria for infective endocarditis	(20)
2)	Discuss the etiology, pathophysiology, clinical features and diagnostic methods to assess the severity of chronic aortic regurgitation	(20)
3)	Explain the echocardiographic methods to assess severity of aortic stenosis	(10)
4)	Explain the features of different types of prosthetic valves and write five indications for implantation of valve	(10)
5A)	Explain the etiology and pathophysiology of mitral regurgitation	(5)
5B)	Explain the echocardiographic methods to assess severity of pulmonary regurgitation	(5)
5C)	Discuss the jones criteria for diagnosis of rheumatic fever	(5)
5D)	Explain the echocardiographic methods to assess severity of tricuspid stenosis	(5)
5E)	Discuss wilkins score system in mitral stenosis	(5)
5F)	Explain on pulmonary stenosis	(5)
6A)	Name two causes for mitral stenosis	(2)
6B)	List two complications of BMV	(2)
6C)	Name type 3 carpentier classification in mitral regurgitation	(2)
6D)	Define low flow low gradient aortic stenosis	(2)
6E)	List two causes for tricuspid regurgitation	(2)

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