Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Cardiac Care Technology Degree Examination – MARCH 2018

Time: Three Hours | Max. Marks: 100 Marks

INTRODUCTION TO CARDIAC CARE TECHNOLOGY (RS)

Q.P. CODE: 1245

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Define ECG. Describe the Wave patterns and intervals observed and the basis behind the generation of each wave and interval.
2. What are the protocols for Treadmill Exercise testing? What are the contraindications for the test? How will you conduct Treadmill exercise test? What parameters are observed? When do you terminate the test? How will you report the results?
3. Describe the principle behind Echocardiography. What is A-mode, B-mode, M-mode Echocardiography and 2D Echocardiography?

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. How will you determine the Electrical axis of the Heart? What is Normal? What are the abnormalities?
5. Describe the ECG in RBBB and LBBB and Hemiblocks (fascicular block)
6. ECG criteria for Right ventricular Hypertrophy and left ventricular hypertrophy.
7. Describe ECG in various types of AV Block.
8. Mention the various types of Stress test.
9. Cardiac defibrillation.
10. Name the ECG Leads and how Leads are placed during ECG recording.
11. Pitfalls in Transthoracic Echocardiography.
12. Cardiac Ultrasound how is it different from general ultrasound technics.
13. Parasternal long axis view in 2D Echo.
14. Stress echocardiography
15. Basis of Doppler colour flow Imaging.
16. Parasternal short axis view in 2D Echo.
17. Usefulness and disadvantages of pulse wave Doppler and Continuous Doppler.

SHORT ANSWERS (Answer any Ten) 10 x 2 = 20 Marks

18. Draw M-mode Echo of Left ventricle and label it.
19. What are the Structures imaged in Apical 5 chamber view?
20. What are the ECG in Right Atrial Hypertrophy?
21. ECG in Dextrocardia with situs inversus.
22. Structures imaged in subcostal view.
23. ECG in Sinus arrhythmia.
24. What is Holter ECG monitoring?
25. What is meant by rotation of the Heart? How is it recognized in the ECG.
26. ECG in Junctional rhythm.
27. How do you identify right ventricle in 2D Echo?
28. Draw M-mode Echo of Aortic Valve and Label it.
29. How will you measure Heart rate in an ECG with atrial fibrillation?

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II Year B.Sc. Cardiac Care Technology Degree Examination – MARCH-2018

Time: Three Hours | Max. Marks: 80 Marks

Medicine Relevant to Cardiac Care Technology (RS)

Q.P. CODE: 1246

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Discuss various types of cardiomyopathies.
2. Discuss atherosclerosis. Mention the risk factors for atherosclerosis. Discuss about management of myocardial infarction.
3. Mention all cyanotic and acyanotic congenital heart diseases. Discuss about ventricular septal defect (VSD).

SHORT ESSAYS (Answer any Eight) 8 x 5 = 40 Marks

4. Discuss clinical features and diagnosis of acute rheumatic fever.
5. Laboratory diagnosis of coagulation disorders
6. Thrombolytic agents
7. Classify anemia. Discuss about treatment of iron deficiency anemia.
8. Mention the diseases of aorta. Discuss about aortic aneurysm.
9. Cardioembolic stroke and its management
10. Aortic regurgitation-aetiology and management
11. COPD
12. Management of chronic renal failure
13. Drug eluting stents

SHORT ANSWERS (Answer any Ten) 10 x 2 = 20 Marks

14. Dextrocardia
15. Name any four beta blockers.
16. Heparin
17. Amiodarone
18. Pericardial effusion
19. Cardiac defibrillation
20. Name any four drugs used in heart failure.
21. Name any four complications of diabetes mellitus.
22. Name any four types of pulse.
23. Types of AV conduction block
24. Anatomy of heart
25. Infective endocarditis prophylaxis

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Cardiac Care Technology Degree Examination – SEP-2018

Time: Three Hours | Max. Marks: 100 Marks

Introduction to Cardiac Care Technology (RS)

Q.P. CODE: 1245

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Echocardiogram in detail and with its modalities and clinical applications
2. Electrocardiogram in detail
3. Exercise test types, protocols to follow while doing exercise test and explain complications during exercise which you encounter.

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Complete heart block
5. M-mode of mitral valve
6. Intervals in electrocardiogram
7. When to terminate treadmill test?
8. B-mode with its advantages and disadvantages
9. ECG in biventricular hypertrophy
10. Color flow imaging
11. Different types of transducers
12. Precordial leads
13. Different methods to obtain left ventricular ejection fraction
14. Fascicular blocks
15. PR interval
16. Importance of contrast echo
17. Bundle branch blocks

SHORT ANSWERS (Answer any Ten) 10 x 2 = 20 Marks

18. Unipolar limb leads
19. Indications of Transesophageal echo
20. QRS voltage
21. Doppler effect
22. Preparation of patient for TMT
23. 12 lead electrocardiogram
24. Voltage of QRS
25. R-R interval
26. Rhythms in ECG
27. Normal Doppler flow pattern
28. Electrical fields of the heart
29. ECG in RA enlargement

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II Year B.Sc. Cardiac Care Technology Degree Examination – SEP-2018

Time: Three Hours | Max. Marks: 80 Marks

Medicine Relevant to Cardiac Care Technology (RS)

Q.P. CODE: 1246

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Ischemic heart disease. Please describe, signs, symptoms, diagnosis and treatment
2. Renal transplant: indications and complications
3. Diabetes mellitus. Complications and treatment

SHORT ESSAYS (Answer any Eight) 8 x 5 = 40 Marks

4. Morbid obesity
5. Complications of hypertension
6. Pericardial tamponade
7. Pulmonary edema
8. Aortic aneurysms
9. Uses of pulmonary function tests
10. Sympathetic nervous system
11. Status epilepticus
12. Mitral stenosis
13. Parkinsonism

SHORT ANSWERS (Answer any Ten) 10 x 2 = 20 Marks

14. Iron deficiency anemia
15. Hemophilia
16. Prothrombin time (PT)
17. Importance of platelets
18. Rheumatic fever
19. Eclampsia
20. Pulmonary hypertension
21. PDA
22. Sinus bradycardia
23. What is JVP?
24. Define cyanosis. What are the causes?
25. Methemoglobinemia

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