



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Third Year (Semester-VI) November 2024 Examination

B.Sc. Cardiac Care Technology (CCT)

Time: 3 Hrs.

[Max. Marks: 100]

Cardiac Care Technology - Clinical

Q.P Code: J6791

Long Essay

2 X 10= 20 Marks

1. Write in detail about the procedure, views and complications of coronary angiography.
2. Describe in detail about the Echocardiographic features of Constrictive Pericarditis

Short Essay (Answer Any 10)

10 X 5= 50 Marks

3. Indications and procedure of right heart catheterization
4. Constrictive versus Restrictive cardiomyopathy
5. Indications and procedure of left heart catheterization
6. Indications and procedure of peripheral angiography
7. Echocardiographic features of cardiac tamponade
8. Anaphylactoid reactions to contrast media.
9. Swanz catheter.
10. Complications of left heart catheterization.
11. Echo features of pericardial effusion.
12. Draw various wave forms of aortic, RA and RV.
13. Indications and contraindications of coronary angiogram.
14. Cathposition and contraindications of right heart catheterization.

Short Answers (Answer any 10)

10 X 3= 30 Marks

15. Complications of peripheral angiography
16. Complications of right heart catheterization
17. Guiding catheters
18. Shunt fraction (Qp/Qs) formula
19. Normal oxygen saturation of SVC, IVC, RA and RV
20. Seldinger's Technique
21. Name any three low-osmolar non-ionic contrast agents
22. Echo in pericardial effusion
23. Materials used during coronary angiography
24. Use of contrast power injector
25. Judkins catheter
26. Universal coronary catheters



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B.Sc. Cardiac Care Technology (CCT)

Time: 3 Hrs.

[Max. Marks: 100]

Cardiac Care Technology - Applied

Q.P Code: J6792

Long Essay

2 X 10= 20 Marks

1. Dobutamine stress echo- indications and procedure
2. Indications, procedure and complications of coronary angioplasty

Short Essay (Answer any 10)

10 X 5= 50 Marks

3. Contraindications of TMT
4. When do you terminate a TMT and Different types of ST depression?
5. Responses at rest and stress during a stress echo and their interpretation
6. Materials used for coronary angioplasty
7. Clinical applications of contrast echocardiography
8. Peripheral angioplasty- materials used and procedure
9. Modified Bruce Protocol in TMT?
10. Procedure of contrast echo?
11. Indication and contraindications of Myocardial perfusion study?
12. Fetal Echo Views?
13. Indications of Fetal echo?
14. Chronotropic and Inotropic Effect?

Short Answers (Answer any 10)

10 X 3= 30 Marks

15. Wall motion score index
16. Segments seen in apical 5 chamber view
17. Define hypokinesia and akinesia
18. Segments seen in Apical 2 chamber view?
19. Guiding catheters
20. Angioplasty Stents
21. OTW balloon catheter
22. Bruce protocol in TMT
23. Name any three ultrasound contrast agents
24. Myocardial perfusion scan procedure
25. What is Target Heart Rate?
26. Uses of Fetal echo?

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B.Sc. Cardiac Care Technology (CCT)

Time: 3.00 Hrs.

[Max. Marks: 100]

Cardiac Care Technology Advanced

Q.P Code: J6793



Long Essay

2 X 10= 20 Marks

1. Discuss in detail about the materials used, procedure of ASD device closure
2. Pressure recordings in various cardiac chambers in detail

Short Essay (Answer any 10)

10 X 5= 50 Marks

3. Temporary pacing Methods?
4. Oximetry at the level of various cardiac chambers
5. Materials used and Procedure of VSD device closure
6. Use of implantable cardioverter defibrillator
7. Write a note on Electrophysiological study
8. Indications and complications of VSD device closure
9. Describe Indications and complications of ASD Device Closure
10. Seldinger's Technique?
11. ASD types and Rims in Detail?
12. Indication and Contraindications of Temporary pacing
13. Types of Arrhythmias? Describe about Complete Heart Block?
14. Indications and Procedure of Permanent pacemaker Implantation?

Short Answers (Answer any 10)

10 X 3= 30 Marks

15. Sinus rhythm
16. Cyanosis
17. Ventricular fibrillation
18. Ventricular tachycardia
19. Atrial fibrillation
20. Amplatz septal occluder
21. Oximetry- step up in RA- causes
22. Conduction system of the heart
23. Cardiac asystole
24. Precautions to be followed during procedures in pregnancy?
25. Cardioversion
26. Modality of Imaging in Nuclear Cardiology?



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B.Sc. Allied Health Sciences Third Year (Semester-VI) November 2024 Examination

B.Sc. Cardiac Care Technology (CCT)

Time: 2.30 Hrs.

[Max. Marks: 80]

Cardiac Care Technology - Clinical

Q.P Code: K6691

Long Essay

2 X 10= 20 Marks

1. Write in detail about the procedure, views and complications of coronary angiography.
2. Describe in detail about the Echocardiographic features of Constrictive Pericarditis

Short Essay

6 X 5= 30 Marks

3. Indications and procedure of right heart catheterization
4. Constrictive versus Restrictive cardiomyopathy
5. Indications and procedure of left heart catheterization
6. Indications and procedure of peripheral angiography
7. Echocardiographic features of cardiac tamponade
8. Anaphylactoid reactions to contrast media

Short Answers

10 X 3= 30 Marks

9. Complications of peripheral angiography
10. Complications of right heart catheterization
11. Guiding catheters
12. Shunt fraction (Qp/Qs) formula
13. Normal oxygen saturation of SVC, IVC, RA and RV
14. Seldinger's Technique
15. Name any three low-osmolar non-ionic contrast agents
16. Echo in pericardial effusion
17. Materials used during coronary angiography
18. Use of contrast power injector

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November 2024 Examination

B.Sc. Cardiac Care Technology (CCT)

Time : 2.30 Hrs.

[Max. Marks : 80]

Cardiac Care Technology - Applied

Q.P Code : K6692

Long Essay

2 X 10= 20 Marks

1. Exercise stress echo- indications and procedure and interpretation
2. Indications, procedure and complications of coronary angioplasty

Short Essay

6 X 5= 30 Marks

3. Absolute and relative contraindications of TMT
4. Fetal echocardiography- indications
5. Peripheral angioplasty- procedure
6. Clinical applications of contrast echocardiography
7. when do you terminate Dobutamine stress test?
8. Various views in fetal echocardiography

Short Answers

10 X 3= 30 Marks

9. Guiding catheters
10. Angioplasty Stents
11. OTW balloon catheter
12. Protocols used in TMT
13. Name any three ultrasound contrast agents
14. Chronotropic and inotropic effect
15. Wall motion score index
16. Segments seen in apical 3 chamber view
17. Define Akinesia and dyskinesia
18. Complications of coronary angioplasty

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B.Sc. Cardiac Care Technology (CCT)

Time: 2.30 Hrs.

[Max. Marks: 80]

Cardiac Care Technology Advanced

Q.P Code: K6693

Long Essay

2 X 10= 20 Marks

1. Discuss in detail about the indications, materials used procedure and complications of VSD device closure
2. Discuss in detail about Permanent Pacemaker Implantation- procedure and complications

Short Essay

6 X 5= 30 Marks

3. ASD device closure – procedure and complications
4. Pressure tracings of various cardiac chambers with normal values
5. Oximetry in detail
6. ASD types and ASD rims in detail
7. Indications for electrophysiological study
8. Implantable cardioverter defibrillator- uses

Short Answers

10 X 3= 30 Marks

9. Oximetry- step up in RA- causes
10. Conduction system of the heart
11. Cardiac asystole
12. Sinus rhythm
13. Cyanosis
14. Ventricular fibrillation
15. Ventricular tachycardia
16. Modalities of imaging in nuclear cardiology
17. Amplatz septal occluder
18. Cardioversion