

117/126
PM

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Cardiac Care Technology

[Time: 3 Hours]

[Max. Marks: 80]

V SEMESTER

PAPER - I (Medical Instrumentation relevant to Cardiac Care)

QP CODE: 8535

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain the working principles and applications of different types of Transducer.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain different types and modes of Ventilator.
3. Explain ECG lead systems and recording methods with typical waveforms.
4. Discuss electrical safety in a medical environment and shock hazards.
5. Explain working principle of Stethoscope.
6. Describe pulmonary function tests and the working of a spirometer.
7. Explain the principles and applications C -Arm.
8. Discuss types of pacemakers and their clinical applications.
9. Explain defibrillators and their types used in cardiac care.
10. Describe echocardiography techniques: TTE, TEE.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What are limb electrodes?
12. Define Discharge of energy in defibrillator.
13. What is stress echo?
14. Write short notes on piezoelectric ultrasonic transducers.
15. What is the stethoscope auscultation positions for heart sound?
16. Define blood gas analysis.
17. What is pulse oximetry?
18. C-PAP?
19. Define MRI.
20. What is a PTCA?
21. What is coronary angiography?

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V SEMESTER

PAPER - II (Cardiovascular Diseases Pertinent to Cardiac Care Technology)

QP CODE: 8536

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Discuss in detail the pathophysiology, clinical features, diagnostic evaluation, and management of Rheumatic Heart Disease.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain Aortic Stenosis – causes, pathophysiology, and clinical features.
3. Describe Mitral Regurgitation and its complications.
4. Write about Infective Endocarditis – etiology, signs, and treatment.
5. Discuss the pathophysiology and clinical presentation of Angina Pectoris.
6. Explain Myocardial Infarction – types, diagnosis, and management.
7. Describe Systemic Hypertension – classification and treatment including DASH diet.
8. Write about Heart Failure – causes, signs, and medical management.
9. Explain Dilated Cardiomyopathy – causes and clinical features.
10. Describe Pericardial Effusion and Cardiac Tamponade.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Define restrictive cardiomyopathy.
12. List causes of Aortic Regurgitation.
13. What is Mitral Stenosis?
14. Define Coronary Artery Disease (CAD).
15. Write short notes on Diet for IHD.
16. Mention different mechanical supports used in Heart Failure.
17. Define Hypertrophic Cardiomyopathy.
18. What is Pericardiocentesis?
19. List the 6 H's and 6 T's of Cardiac Arrest.
20. Define Pulmonary Embolism.
21. List stages of COPD.

6/7/26
PTM

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B.Sc. in Cardiac Care Technology

[Time: 3 Hours]

[Max. Marks: 80]

V SEMESTER

PAPER - III (Invasive Cardiology)

QP CODE: 8537

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain in detail about counter Pulsation.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Define contrast media and explain hydrophilicity, osmolality, and viscosity.
3. Describe Invasive function assessment of CAD.
4. Explain Vital signs and management during PTCA.
5. Write about IVUS systems and diagnostic applications.
6. Explain Beta blockers
7. Explain Thrombolytic.
8. Describe Angiography procedure.
9. Explain different types of Diagnostic catheters.
10. Write a note on stents: composition and types.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Patient preparation for PTCA.
12. Define indications for carotid angiography?
13. Indications for IABP.
14. Define NTG.
15. What is leveling and balancing of transducer in hemodynamics?
16. Write is the relation between creatinine and contrast agent infusion.
17. Define ejection fraction.
18. What is cardiac output formula?
19. List types of guide wires.
20. What is the use of pigtail catheter?
21. Explain carotid artery anatomy.

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PQ

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Cardiac Care Technology

[Time: 3 Hours]

[Max. Marks: 80]

V SEMESTER

PAPER - IV (CCT Directed Clinical Education III)

QP CODE: 8538

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Write in detail about vasopressors.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write about Crystalloids.
3. Write about heart sounds.
4. What are the emergency drugs used in Cath lab, write about it.
5. IV cannulas.
6. Explain setup of the operation theater.
7. Antihypertensive drugs.
8. Write in detail about sterilization.
9. Explain CPR.
10. What are vital signs? Explain.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write about Adrenaline.
12. DNS.
13. Drip Set.
14. Normal Saline.
15. Write about normal Heart.
16. Write about Frusemide.
17. Write about Noradrenalin.
18. Actions of heart.
19. Write about Lignocaine.
20. Write about Echo Probe.
21. Write about Bradycardia.