

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Cardiac Care Technology

21/7/26
PM

[Time: 3 Hours]

[Max. Marks: 80]

IV SEMESTER

PAPER - I (Development of Cardiovascular System, Cardiovascular Pathology)

QP CODE: 8435

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Describe the formation of the atrial and ventricular septum with labeled diagrams and explain their importance in heart development.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain the formation and function of the atrioventricular (AV) canal.
3. Describe the development of the embryonic ventricle.
4. Explain the development of the sinus venosus and its adult derivatives.
5. Write a short note on fetal blood circulation and oxygen exchange.
6. Describe myocardial function and energy metabolism in the fetus.
7. Explain the systemic circulation in an adult heart.
8. Discuss the pathophysiology and management of pulmonary stenosis.
9. Describe the pathophysiology and management of Coarctation of the aorta.
10. Write short notes on cardiomegaly – causes, symptoms, and diagnosis.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Define cardiac looping.
12. Mention the types of ventricular septum.
13. What is the role of Ductus Arteriosus in fetal life?
14. Write two functions of the pericardium.
15. Mention three causes of pulmonary hypertension.
16. Define angina pectoris.
17. List any three complications of myocardial infarction.
18. Name two investigations used in diagnosing heart failure.
19. Write a note on atherosclerotic plaque formation.
20. Mention the types of cardiac muscle fibers.
21. Define endocarditis and mention one symptom.

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IV SEMESTER

PAPER - II (Advanced Electrocardiography)

QP CODE: 8436

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain phases of myocardial Infarction with appropriate Electrocardiographic illustrations.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Electrocardiographic manifestation of VT.
3. Electrocardiographic effects of hyperkalemia.
4. Digitalis effect on myocardial repolarization.
5. ECG features of supraventricular tachycardia.
6. Write ECG in Pulmonary Hypertension.
7. ECG evaluation of P wave.
8. Posterior myocardial infarction.
9. Quinidine effect on ECG.
10. ECG features of LVH and RVH

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Significance of RBBB
12. List out the causes of low voltage QRS Complex
13. Narrate the causes of left axis deviation
14. ECG manifestation of Acute Pericarditis
15. Write about ST segment elevation
16. SI, SII, SIII syndrome.
17. ECG features of Atrial Premature complex
18. Indications for DC version.
19. How will you calculate the HR in ECG?
20. ECG recognition of second degree AV Block.
21. How to recognize bilateral enlargement?

APR 26
PM

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IV SEMESTER

PAPER - III (Advanced Echocardiography)

QP CODE: 8437

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Segmental echocardiographic approach to congenital heart diseases.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write the indications and contraindications of Transesophageal Echocardiography.
3. Echocardiographic assessment of Mitral regurgitation.
4. Echocardiographic features of cardiac tamponade.
5. Echocardiographic features of Tetralogy of Fallot.
6. Echo features of Patent Ductus Arteriosus.
7. Wilkins score for Mitral stenosis.
8. Assessment of pulmonary hypertension by echocardiography.
9. Draw neat and labeled diagram of coronary arteries and mention the LV segments they supply.
10. Different methods to calculate EF by echocardiography and their limitations.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Mitral valve prolapse.
12. Coarctation of Aorta.
13. Teichholz method.
14. Type of Stress Echocardiography.
15. Pericardial effusion.
16. Stroke volume calculation by echocardiography.
17. Segments of LV by echocardiography- ASE model.
18. Dilated Cardiomyopathy.
19. Name different methods to measure mitral valve area.
20. Flail Mitral valve.
21. LV mass calculation by Echocardiography.

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P19

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IV SEMESTER

PAPER - IV (CCT Directed Clinical Education - II)

QP CODE: 8438

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. What is Biomedical Waste Management? What are the types of BMW and why it is important?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Classify Vital signs and write the factors affecting the vital signs.
3. ECG in Complete Heart Block.
4. Draw different Echocardiographic views.
5. What are the types of IV cannula? Explain.
6. Write about Hot Air Oven.
7. Defibrillators.
8. Advanced life support.
9. What are colloid fluids and crystalloid fluids?
10. Explain Basic life support.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What are the indications to terminate treadmill test?
12. What are the four major types of radiation?
13. What is pasteurization?
14. What is the principle of autoclave?
15. What are the 3 main types of IV fluids?
16. Side effects of radiation.
17. Explain Steam sterilization
18. What are the types of Intubations?
19. Write about C PAP.
20. Types of Diuretics.
21. What is sterility protocol in operation theatre?