

11/12/26
AM

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Cardiac Care Technology

[Time: 3 Hours]

[Max. Marks: 80]

III SEMESTER

PAPER - I (Applied Anatomy, Physiology & Pharmacology)

QP CODE: 8335/8338

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Section 8335 (Anatomy & Physiology)

Long Questions

10X1 = 10 Marks

1. Describe the blood supply of heart in detail. Add a note on coronary predominance.

Short Essays: (Any – 4)

5 X 4 = 20 Marks

2. Cardiac plexus.
3. Arch of aorta- origin, course, relations and branches.
4. Interior of right ventricle.
5. Define blood pressure, what are the long term regulatory mechanisms
6. Describe coronary circulation

Short Answers (Any – 5)

2 X 5 = 10 Marks

7. Oblique sinus of heart-boundaries
8. Sinusoids.
9. Hypertension
10. Myocardial infarction (MI)
11. Baroreceptor reflex
12. Mean arterial blood pressure

Section 8338 (Pharmacology)

Long Questions

10X1 = 10 Marks

1. Write mechanism of action, therapeutic uses and adverse effects Acetyl Salicylic Acid (Aspirin-ASA).

Short Essays: (Any – 4)

5 X 4 = 20 Marks

2. G –Protein coupled receptor mediated pharmacological actions.
3. Therapeutic uses and contraindications of Morphine.
4. Mechanism of action and therapeutic uses of Tetracyclines.
5. Therapeutic uses and adverse effects of Atropine.
6. Mechanism of action and adverse effects of Insulin.

Short Answers (Any – 5)

2 X 5 = 10 Marks

7. What is first pass metabolism and name two methods to avoid it.
8. Name two cough suppressants and two Mucolytics.
9. Adverse effects of diuretics.
10. Name four drugs useful in glaucoma.
11. Mechanism of action of Omeprazole.
12. Write four Antihypertensive drugs.

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III SEMESTER

PAPER - II (Basic Electrocardiography)

QP CODE: 8336

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. ECG in AV Blocks.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. P wave
3. What is the R wave progression in chest leads and why?
4. Augmented limb leads
5. SI, SII, SIII syndrome.
6. Rotation of the Heart
7. Cardiac wave Front
8. When and how do you record right chest leads
9. What are U waves and what is there significance
10. Left Bundle Branch Block

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Discuss the precordial leads
12. Normal ECG
13. Second degree AV block
14. QT interval
15. Placement of leads
16. Romhit and Estes point score System
17. LA enlargement
18. Explain RBBB pattern in ECG
19. Transition zone
20. Heart rate determination
21. Normal QRS duration- when do you say it is prolonged, conditions in which it is prolonged

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AM
[Max. Marks: 80]

III SEMESTER

PAPER - III (Basic Echocardiography)

QP CODE: 8337

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

Long Questions

10X1 = 10 Marks

1. Contrast Echocardiography

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Draw labeled diagram of 17 segments of the left ventricle.
3. Doppler shift
4. Diastolic murmurs
5. Describe the procedure of contrast echo.
6. Piezoelectric effect
7. Continuous wave Doppler and pulse wave Doppler.
8. What are murmurs? Describe murmurs heard in AR.
9. Describe Transducer
10. Define resolution and describe its components.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Continuity Equation
12. Color Doppler
13. Mention various modes used in an echo study.
14. Placement of Transducer
15. Color M-mode echocardiography
16. M-mode echocardiography
17. What is Aliasing?
18. Continuous murmur
19. Tissue Doppler imaging
20. Doppler principle
21. Specular and scattered echoes.

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[Max. Marks: 80]

III SEMESTER

PAPER - IV (CCT Directed Clinical Education I)

QP CODE: 8339

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain Emergency Situations and its management

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Briefly Explain about cath lab
3. Management of Cardiac arrest
4. Pathophysiology of tachycardia & bradycardia
5. Actions of heart
6. Explain conduction system of heart
7. Explain role and responsibilities of cardiac care technologist
8. Management of Hypertension
9. Write Anatomy of heart
10. Explain patient care and management in ICU

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Beta Blockers
12. Calcium channel blockers
13. Repolarization
14. What is hypoxemia?
15. How to calculate hemoglobin from hematocrit?
16. Circulatory system of heart
17. Led aprons
18. What is Oxygen therapy?
19. What are cardiomyocytes?
20. C arm machine
21. Contrast media