



**Avinashilingam Institute for Home Science and Higher Education for Women**

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

**Bachelor's Degree Examination – May 2025**

**VI Semester**

**Class : III UG / 2021 Batch**  
**Major : Physician Assistant**

**Time: 3 Hours**  
**Max. Marks: 100**

**21BPAC30 / 22BPAC31 Cardiology**

**Course outcomes:**

On the successful completion of the course, students will be able to

CO1: Understand the basics of anatomy and physiology of cardiovascular system, body fluids, blood.

CO2: Know the importance of assessment and diagnostic procedures, invasive techniques in cardiovascular system.

CO3: Improve knowledge in cardiovascular diseases and peripheral vascular diseases.

CO4: Provide students insight into drug and intensive care management of Cardiovascular System.

CO5: Aware of various surgical procedures and post operative rehabilitative management of cardiovascular system, cardiac rehabilitation and life style modifications.

**Part A**

**10 x 1 = 10**

**Choose the Correct Answer**

1. The cardiac cycle consists of:  
a. Only systole  
b. Only diastole  
c. Systole and diastole  
d. Neither systole nor diastole  
CO1 K1
2. During exercise, which compensatory mechanism occurs \_\_\_\_\_  
a. Decreased heart rate  
b. Increased cardiac output  
c. Decreased blood pressure  
d. Decreased stroke volume  
CO1 K1
3. 24-hour ambulatory BP monitoring is used to:  
a. Measure blood glucose  
b. Monitor heart rhythm  
c. Track blood pressure variations  
d. Assess lung function  
CO2 K1
4. Imaging technique uses sound waves is  
a. CT scan  
b. MRI  
c. Echocardiogram  
d. X-ray  
CO2 K1
5. Rheumatic fever primarily affects:  
a. Brain tissue  
b. Heart valves  
c. Lung tissue  
d. Liver tissue  
CO3 K1
6. Myocarditis is the inflammation of:  
a. Heart valves  
b. Heart muscle  
c. Blood vessels  
d. Pericardium  
CO3 K1
7. Drug class is used to reduce blood pressure is  
a. Beta blockers  
b. Antibiotics  
c. Antihistamines  
d. Antacids  
CO4 K1
8. Equipment is essential in cardiac ICU \_\_\_\_\_  
a. Ventilator  
b. Microscope  
c. X-ray machine  
d. Ultrasound machine  
CO4 K1
9. CABG stands for:  
a. Cardiac Arterial Bypass Graft  
b. Coronary Artery Bypass Grafting  
c. Cardiac Arterial Blood Grafting  
d. Coronary Arterial Blood Graft  
CO5 K1
10. Post-operative cardiac rehabilitation includes:  
a. Bed rest only  
b. Medication only  
c. Exercise and lifestyle modification  
d. Surgery only  
CO5 K1

**Part B**  
**Answer ALL questions**  
**Each answer should not exceed 400 words or two pages**

**5 x 6 = 30**

- 11.a. List and describe the four chambers of the heart with their anatomical features.  
(or)  
11.b. Write the events occurring during the cardiac cycle. CO1 K2
- 12.a. List five important findings in cardiac auscultation.  
(or)  
12.b. Write the basic principles of electrocardiogram. CO2 K2
- 13.a. List five clinical features of ischemic heart disease.  
(or)  
13.b. Write on Burger's disease. CO3 K3
- 14.a. List five major classes of antihypertensive drugs.  
(or)  
14.b. Write the classification of drugs used in heart failure. CO4 K2
- 15.a. Discuss the open heart surgery.  
(or)  
15.b. Write the types of cardiac valve replacement procedures. CO5 K2  
CO5 K3

**Part C**  
**Answer ALL questions**  
**Each answer should not exceed 800 words or four pages**

**5 x 12 = 60**

- 16.a. Define cardiac output, describe the factors affecting cardiac output, Write about Cardiovascular responses to exercise.  
(or)  
16.b. List the heart valves, describe their structure and location, Write about their function in circulation. CO1 K2
- 17.a. Define stress test, List different types of stress tests, Write their clinical significance.  
(or)  
17.b. List the types of cardiac imaging techniques, describe basic principles of echocardiogram, Write about Doppler ultrasound. CO2 K2
- 18.a. Define myocardial infarction, list its clinical features, Write its complications.  
(or)  
18.b. List types of heart failure, write its clinical features and mention compensatory mechanisms. CO3 K2
- 19.a. Define cardiac glycosides, list their therapeutic uses and write their mechanism of action.  
(or)  
19.b. List the types of ICU equipment, describe types of ventilators and write about Cardiac monitors. CO4 K2  
CO4K3
- 20.a. Define CABG, list its indications, write about post-operative care.  
(or)  
20.b. List the phases of cardiac rehabilitation, Write about lifestyle modifications. CO5 K3  
CO5 K3

\*\*\*\*\*