Time : 3 hours
Max. Marks : 100

Important instructions:
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

   4+(2+2+2)

2. a) Pressure gradient measurements during cardiac catheterization.
   b) How to calculate stenotic valve area in cath lab?
   5+5

3. Physiologic and pharmacologic maneuvers in cath lab.
   5+5

   5+5

5. What is quantitative coronary angiography? What are the pitfalls of coronary angiography?
   5+5

6. Cytoskeletal proteins in the myocardium and their role in heart failure.
   5+5

7. a) Microanatomy of contractile cells and proteins.
    b) Calcium iron fluxes in cardiac contraction and relaxation cycle.
   5+5

8. Neurohormonal alterations in renal functions and peripheral vasculature in CHF.
   5+5

   5+5

10. Describe high risk vulnerable plaque. What are the modalities to treat it?
    5+5