

**B.Sc. CARDIAC TECHNOLOGY
THIRD YEAR
PAPER I – CARDIAC CATHETERIZATION LABORATORY BASICS**

Q.P. Code : 801521

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the Fick and thermodilution method of Cardiac out put measurement and their advantages and disadvantages.
2. How do you calculate shunt in Atrial septal defect, Patent ductus arteriosus and Ventricular septal defect?
3. Describe in detail the setting of a cardiac cath lab about room size, geometry and table, other equipments and quality assurance.

II. Write Notes on:

(8 x 5 = 40)

1. Indications for left ventriculography
2. What are the parameters set in the injector during ventriculography and what are the precautions
3. What are the access site complications of an angiogram and how do you manage the same?
4. Name the catheters used for coronary angiography. What is the common catheter used from radial access?
5. Describe the fluid filled pressure measurement system and source of error in pressure measurement and precautions to be taken in setting up the equipment.
6. What is micromanometer catheters and their advantage?
7. Name the factors that increase the amplitude of reflected waves
8. How many views are done for LV angio in post MI patient to assess regional wall motion abnormality and LV function? Why?

III. Write Notes on:

(10 x 3 = 30)

1. Catheters used for left ventriculography and why?
2. What is the importance of isocentre in the lab
3. What is the advantage of radial access over femoral access
4. What is spider view and name the coronary segments best seen.
5. What are the precautions to be taken during pressure injection
6. What is the vasodilator cocktail used during radial access
7. Importance of frequency response in pressure measurement
8. Draw pressure waves indicating 1. damping 2. ventricularisation
9. Uses of an end hole catheter and name an end hole catheter used in wedge pressure measurement
10. How do you record pressure gradients between two chambers?
