

DIPLOMA IN CARDIAC NON-INVASIVE TECHNOLOGY
SECOND YEAR
PAPER II – ADVANCED CARDIOVASCULAR INVESTIGATIONS

Q.P. Code: 842412

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on:

(3 x 10 = 30)

1. Discuss in detail about the indications and contraindications for percutaneous transluminal coronary angioplasty.
2. Discuss in detail about the catheters used, views, use of the power injector in left ventriculography.
3. Discuss in detail about the cinefluorographic system in a cardiac cath lab.

II. Write notes on:

(10 x 5 = 50)

1. Discuss the concept of pressure half time and continuity equation and their application in echocardiography.
2. What are the echocardiographic features of ventricular septal defects?
3. Discuss in detail the echocardiographic features of cardiac tamponade.
4. Discuss about the advantages and limitations of pulse oximetry.
5. Discuss the various modes of mechanical ventilation.
6. Discuss about patient preparation for a cardiac cath study.
7. Discuss about the post PCI procedure sheath care and sheath removal and its complications.
8. What are the Indications for cardiac catheterization?
9. Discuss the indications, contraindications and the procedure of permanent pacemaker implantation.
10. What are the indications and instruments needed for balloon mitral valvuloplasty?

III. Short answers on:

(10 x 2 = 20)

1. How to calculate stroke volume in echocardiogram?
2. What are the main echocardiographic features of tetralogy of Fallot?
3. What is the Doppler feature of coarctation of aorta?
4. Rhythms for which temporary pacemaker is used in an ICU?
5. What are the contraindications for CPAP ventilation?
6. What are the parts of a mechanical ventilator?
7. What are the instruments used in PDA closure?
8. What are the indications for pulmonary angiography?
9. What are the types of coronary stents and name some of them?
10. What are the contrasts used in cardiac cath lab and what are their complications?