

**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 the types, indications, modes and complications of mechanical ventilation.
2. Discuss in detail the indications, types and technique of cardioversion.
3. Discuss in detail about basic life support.

II. Write notes on:

(10 x 5 = 50)

1. Discuss the concept of segmental analysis in paediatric echocardiography.
2. Discuss the various positions and views in transthoracic echocardiography.
3. What are the echocardiographic features of pulmonary hypertension?
4. What is a defibrillator and what are its parts?
5. Discuss about the infection control practices in a ICU.
6. Discuss about myocardial perfusion imaging and their advantages over other modes.
7. Discuss about the emergency medications used in a cardiac ICU.
8. How to set up a cath lab for percutaneous transluminal coronary angioplasty?
9. Discuss in detail about the modes, types and parts of a permanent pacemaker.
10. Discuss the procedure of atrial septal defect device closure.

III. Short answers on:

(10 x 2 = 20)

1. How is the aortic regurgitant volume calculated in echocardiography?
2. What are the echocardiographic findings in infective endocarditis?
3. What are the echocardiographic features of severe aortic stenosis?
4. What is the use of CPAP mode of ventilation?
5. What is the difference between a trans thoracic and trans oesophageal ECHO probe?
6. What are the cardiac rhythms that can be defibrillated?
7. How to give cardiac compressions during cardio pulmonary resuscitation?
8. What are the types of coronary angiographic catheters?
9. How can you do shunt calculation in ASD?
10. What are pacemakers and are their uses?