

**B.Sc. CARDIAC TECHNOLOGY
SECOND YEAR
PAPER III – ECHOCARDIOGRAPHY**

Q.P. Code: 801533

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: (3 x 10 = 30)

1. Assessment and Grading of Diastolic dysfunction with diastolic filling pattern in Atrial Fibrillation and Sinus Tachycardia.
2. Segmental echocardiographic approach to congenital heart disease.
3. Describe with neat labeled diagram the 17 segment model of left ventricle for regional wall motion assessment, also mention the wall motion score index.

II. Write notes on: (8 x 5 = 40)

1. Merits and limitation of M mode echocardiogram.
2. Colour flow Doppler imaging – technique, utility and limitations.
3. Different methods of calculation of ejection fraction by Echo and their limitations.
4. Write echo features of rheumatic mitral valve.
5. Echocardiographic signs of cardiac tamponade.
6. Assessment of severity of aortic stenosis, usefulness and limitation of continuity equation.
7. Echocardiographic features of Tetralogy of Fallot.
8. Calculation of left ventricular Mass.

III. Short answers on: (10 x 3 = 30)

1. Doppler shift.
2. Vegetation Vs thrombus in Echocardiogram.
3. Determination of mitral valve area by pressure half time.
4. Usefulness of colour B mode scanning.
5. Draw and label the LV Myocardial segments.
6. DP/DT.
7. Techniques and usefulness of contrast echocardiogram.
8. Echocardiographic assessment of stroke volume.
9. Flail mitral valve.
10. Illustrate the structures visualized in suprasternal view.