

**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. Describe with neat labelled diagram the 17 segment model of left ventricle for regional wall motion assessment, also mention the wall motion score index.
2. Elaborate on echo evaluation of mitral regurgitation (mild, moderate and severe) with diagrams and various echo parameters used to assess mitral regurgitation.
3. Elaborate on echo features of dilated cardiomyopathy and hypertrophic cardiomyopathy.

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

1. Mention the indications of bubble contrast echo. Write in short about the technique of bubble contrast echo.
2. Mention point wise echo features of cardiac tamponade.
3. Write echo features of Tetralogy of Fallot.
4. Write a note with formula on how to calculate pulmonary artery pressure on echo study?
5. Write indications and contraindications of transesophageal echo (TEE).
6. Draw neat labelled diagram of parasternal long axis (PLAX) and parasternal short axis (PSAX) views in 2D echo study.
7. Write Stages of LV diastolic dysfunction based on echo indices in a tabular manner.
8. Draw neat labelled diagram of left to right shunts ( ASD, VSD, PDA) seen in various echo views ( A4C, PSAX, SUBCOSTALS).

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

1. Mention various modes used in an echo study.
2. Write three points comparing Pulse wave Doppler and Continuous wave Doppler.
3. Mention echo features of coarctation of aorta. What is the commonest site of coarctation?
4. Classify aortic stenosis based on echo gradients (peak and mean).
5. Write the differential diagnosis of right atrium mass.
6. Write echo features of rheumatic mitral valve.
7. Write types of aortic dissection with diagrams.
8. Write the principles of colour Doppler.
9. Draw a neat labelled diagram of suprasternal long axis view. What is it commonly used to diagnose?
10. Write in short about tissue doppler imaging (TDI).

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