

**VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM**  
**(Deemed to be University)**

**B.Sc. (CARDIAC TECHNOLOGY) & M.Sc.(INTEGRATED CARDIAC  
TECHNOLOGY) DEGREE EXAMINATION**

**September 2021**

**Third Year**

**ECHOCARDIOGRAPHY**

Time: Three hours

Maximum: 75 marks

**I. Write an Essay on any ONE of the following: (1 x 20 = 20)**

1. Explain 2 dimensional, M-mode, Doppler, color flow imaging and severity of Mitral stenosis.
2. Explain Transducer position and cardiac views in transthoracic echo with diagrams.

**II. Write short notes on any TWO of the following: (2 x 10 = 20)**

3. Explain 2D, M-mode, Doppler echocardiography and severity of Aortic stenosis.
4. Evaluation of Prosthetic valve regurgitation by Doppler and color flow imaging.
5. Estimation of regurgitant volume and regurgitant fraction by volumetric method.
6. Patient preparation for transesophageal ECHO (TEE) before, during and after procedure.

**III. Write short answers on any SEVEN of the following: (7 x 5 = 35)**

7. Diagnostic criteria for infective endocarditis.
8. 2D and Doppler finding in restrictive cardiomyopathy.
9. Estimation of pulmonary artery systolic, diastolic and mean pressure by using tricuspid and pulmonary regurgitation.
10. Pulsed wave Doppler.
11. Wall Motion Score Index (WMSI)
12. 2D, M-mode, Doppler and color flow imaging in tricuspid regurgitation.
13. Echocardiographic features in constrictive pericarditis.
14. Types of Atrial Septal Defect (ASD) with diagram.
15. Assessment of patent Ductus Arteriosus (PDA) by Echo.
16. Right ventricular infarct.

