

SL.No: M23277

Course Code: 2670103/162614T03

**VINAYAKA MISSIONS RESEARCH FOUNDATION, SALEM  
(Deemed to be University)**

**M.SC.(ECHOCARDIOGRAPHY) / INTEGRATED CARDIAC TECHNOLOGY  
DEGREE EXAMINATION - January 2021  
First Year / Fourth Year**

**PHYSICS AND INSTRUMENTATION RELATED TO  
ECHOCARDIOGRAPHY**

Time: Three hours

Maximum: 100 marks

Answer **ALL** questions

**I. Write an Long essay on :** **(3 x 20 = 60)**

1. Explain the principles of Doppler echocardiography in detail.
2. Explain Tissue Doppler Imaging (TDI) and its uses to evaluate systolic and diastolic function of left ventricle.
3. Explain the principles of M-Mode and Two-dimensional Echocardiography.

**II. Write short notes on :** **(4 x 10 = 40)**

4. Acoustic impedances of media.
5. Role of 3 dimensional echocardiography in evaluating left ventricle.
6. Indication of Transesophageal echocardiography.
7. Left ventricular longitudinal function assessed by speckle tracking.

\*\*\*\*\*