

SL.No: M22013

Course Code: 2670103/26617403

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

**M.SC (ECHOCARDIOGRAPHY/INTEGRATED PROGRAMS IN CARDIAC
TECHNOLOGY)
DEGREE EXAMINATION – December 2021
First Year/Fourth Year**

**PHYSICS AND INSTRUMENTATION RELATED TO
ECHOCARDIOGRAPH**

Time: Three hours

Maximum: 100 marks

Answer **ALL** questions

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

1. Describe the physical properties of ultrasound.
2. Explain in detail transducers and how transducers produce the Ultrasound Beams.
3. Describe the Principles of Doppler Echocardiography.

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

4. Transoesophageal echocardiography.
5. Factors influencing resolution in variables in real time sector scanning.
6. Proximal Isovelocity Surface Area (PISA)
7. Oscillatory and shear forces.
