

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM  
(Deemed to be University)  
M.SC(ECHOCARDIOGRAPHY) DEGREE EXAMINATION – February 2020  
First Year**

**PHYSICS OF INSTRUMENTATION RELATED TO  
ECHOCARDIOGRAPHY**

Time: Three hours

Maximum: 100 marks

Answer **ALL** questions

**I. Write an Long essay on :** **(2 x 20 = 40)**

1. Echo cardiac evaluation of Cardiac dyssynchrony for predicting a favourable response to cardiac resynchronisation
2. Explain strain & strain rate Imaging by Echocardiography.

**II. Write short notes on :** **(10 x 6 = 60)**

3. Views used in Transesophageal Echocardiography.
4. Tissue Doppler Imaging in assessing diastolic function.
5. Pulse and Continuous wave Doppler.
6. Advantages of 3-Dimensional Echocardiography.
7. Linear and Azimuthal beams.
8. Gain and Depth Control.
9. Principles of M-Mode Echocardiography.
10. Color gains and color maps – Explain.
11. Regional wall motion assessment by Bull's eye method.
12. Principles of Contrast Echo.

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