

M. Tech. Structural Engineering & Construction (CBCS Pattern) Semester - I
PSES151 / PEPS1(A) - Structural Instrumentation & Material Science

P. Pages : 1

Time : Three Hours



GUG/S/23/10966

Max. Marks : 70

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- Notes :
1. All questions carry equal marks.
 2. Answer **any five** questions.
 3. Due credit will be given to neatness and adequate dimensions.
 4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain with neat sketch transducers for shock and vibration measurement. **7**
b) Explain with neat sketch Linear Valuable Displacement Transducer (LVDT). **7**
2. a) Explain various types of photo electric strain gauge. **7**
b) Explain non-contact type transducers and its working principle. **7**
3. a) What is Ferrocement? What are the advantages and disadvantages of ferrocement. **7**
b) Explain steel fiber reinforced concrete (SFRC). Draw stress – strain curve in compression of SFRC. **7**
4. a) Explain in detailed with diagram of ultrasonic testing. **7**
b) What are various advantages and limitations of NDT. **7**
5. a) Explain different method of prevention of corrosion? Differentiate between Galvanising and tinning. **7**
b) Explain various types of admixture with its effect on concrete. **7**
6. a) Explain high performance concrete with its application. **7**
b) How special type of concrete improve performance of concrete. Explain in details. **7**
