

M.Tech. Structural Engineering & Construction CBCS Pattern Semester-I
PSES151 / PSES1(A) - Structural Instrumentation & Material Science

P. Pages : 1

Time : Three Hours



GUG/W/23/10966

Max. Marks : 70

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

1. a) What is Lightweight Concrete? -Types, Uses and Advantages. **7**
b) What is No-Fines Concrete? Advantages and Mix Proportion. **7**
2. Explain in detail Corrosion Prevention in Concrete THE CATHODIC PROTECTION OF REINFORCING STEEL BARS USING PLATINISED-TYPE MATERIALS **14**
3. a) Explain model analysis of concrete by petrographic procedure. **7**
b) State various NDT testing method and explain ultrasonic method in detail. **7**
4. a) Explain in detail different types of Fiber-Reinforced plastic. **7**
b) Explain in detail Fiber reinforced composites sandwich panels with web reinforced wood core for building floor applications. **7**
5. a) Explain in detail potentiometer circuit of strain gauge measurement. **7**
b) Explain the procedure for the principle of force measurement with strain-gage-actuated transducers. **7**
6. Explain in detail Displacement Transducer: Circuit, Types, working & Its applications. **14**
