

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**.

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| 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 |
