

M. Tech. Structural Engineering & Construction (Old & C.B.C.S. Pattern) Sem-I
PSES13 - New Construction Materials

P. Pages : 1

Time : Three Hours



GUG/S/19/10963

Max. Marks : 70

- Notes :
1. All questions carry equal marks.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Distinguish between high strength concrete and high performance concrete. Write in detail about J ring test and V funnel time test. **25**
- b) Discuss in detail the different techniques for measurement of toughness for fiber reinforced concrete. How sampling of concrete should be done for quality control tests. **10**

OR

2. a) Write note on types of structural steels, special steel. Also distinguish between alloy steel and stainless steel. **11**
- b) Describe any two test procedures on self compacting concrete. **12**
- c) What is polymer? Describe in brief the classification of plastics, its advantages and applications in conventional and commercial areas. **12**
3. a) Write specifications of water proofing compounds for cement mortar and concrete. **12**
- b) Write special features of smart and intelligent materials for intelligent buildings. **12**
- c) Write note on Refractories and glass wool. **11**

OR

4. a) What are various flooring and facade materials available. Write their specifications. **12**
- b) Explain recycled materials used for green building. **12**
- c) Write note on fire resistance materials state its uses and applications. **11**
