

Code No: **RT42013F****R13****Set No. 1****IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018****GREEN BUILDINGS****(Civil Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

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**PART-A (22 Marks)**

1. a) Define green building. [4]
- b) What is ferro-concrete? [4]
- c) What are non conventional energy resources? [3]
- d) How solar energy is converted to electrical energy? [3]
- e) Define passive cooling. [4]
- f) Define the term LEED. [4]

**PART-B (3x16 = 48 Marks)**

2. a) Explain in detail about advantages and short comings of green buildings. [8]
- b) Explain the planning criteria for daylight, ventilation and storm water drainage. [8]
3. a) Write detailed notes on eco-friendly materials for green buildings. [8]
- b) Explain the alternative technologies used in green building. [8]
4. a) What is need to conserve energy and water in buildings? [8]
- b) Explain the techniques to convert waste into energy in residential complexes and gated communities. [8]
5. a) Explain about any fully solar energy based building in India. [8]
- b) Explain the solar energy potentiality in India. [8]
6. a) Explain the passive cooling techniques in green buildings. [8]
- b) How the climate design in green buildings can be conducted? [8]
7. a) What is purpose of green rating system and explain its objectives? [8]
- b) What are the advantages of modular waste water treatment systems? [8]