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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Eighth Semester, B.E. - Civil Engineering

Semester End Examination; June-2016

Alternative Building materials and Technologies

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO full questions from each part.

PART - A

- 1 a. Discuss the environmental issues related to building materials. Explain how to mitigate these environmental problems. 10
- b. Which are the environment friendly and cost effective building technologies and explain any two environment friendly and cost effective technology? 10
- 2 a. Explain in detail the concept, raw materials and process of SMB with neat sketch. 10
- b. Explain the manufacturing process of the stone masonry block. 5
- c. Which are the factors to be considered for selection of building blocks? Explain any one. 5
- 3 a. Discuss about the raw materials used for lime Pozzolana Cement. 7
- b. Mention the broad classification of fibres. What are the important properties of fibres? 6
- c. What are the typical Industrial wastes? Explain use of any one industrial waste. 7
- 4 a. Explain with neat sketch the construction Techniques of Rat-trap bond. 6
- b. What are the factors to be considered for selecting of mortar? Explain any one. 6
- c. Explain the concept and construction procedure of filler-slab roof. 8

PART - B

- 5 a. With the help of neat sketch explain the modified- wrench test to check the brick-mortar bond strength. 10
- b. What are the factors influencing compressive strength of masonry? Explain any two. 10
- 6 a. Define ; 6
 - i) Cavity wall ii) Faced wall iii) Veneered wall
- b. According to IS -1905 how to consider effective height for wall, column and openings in walls. 14
- 7 a. List out the cost reduction techniques through construction process efficiency. Explain any two. 10
- b. Write short notes on cost concepts in buildings. 10
- 8 a. Explain with the help of neat sketch casting of curved shape (Jack-arch) Panel and beam. 10
- b. Explain the procedure of slip-form construction technique for the construction of masonry vaults. 10

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