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

*(An Autonomous Institution affiliated to VTU, Belgaum)*

**Third Semester, B.E. - Civil Engineering**

**Semester End Examination; Dec - 2016/Jan - 2017**

**Building Materials and Construction**

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Time: 3 hrs

Max. Marks: 100

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Note: Answer FIVE full questions, selecting ONE full question from each unit.

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**UNIT - I**

- 1 a. With neat sketches explain dressing of stones and its types. 10
- b. Explain the qualities of good brick. 10
- 2 a. With neat sketches, explain various defects of timber. 10
- b. Write a short note on ply wood and its uses. 10

**UNIT - II**

- 3 a. Explain the preliminary investigation that has to be carried out on soil samples to select suitable type of foundation. 10
- b. Draw neat sketches of: 10
  - i) Raft foundation      ii) Well foundation.
- 4 a. Explain different types of pile foundations. Draw neat sketches. 10
- b. Write a note on foundations in black cotton soil. 10

**UNIT - III**

- 5 a. Differentiate between English bond and Flemish bond. Draw neat sketches of the elevation of wall built in English and Flemish bond. 10
- b. Explain the method of laying marble flooring. 10
- 6 a. What is shoring? Under what circumstances it is recommended? Draw neat sketch of raking shore and name the parts. 10
- b. Write an explanatory note on reinforced brick work. Draw neat sketches. 10

**UNIT - IV**

- 7 a. Sketch the elevation of a wooden king post roof truss for a span of 6 m and name the parts. 10
- b. List and explain the requirements of a good stair. 10
- 8 a. Sketch the elevation of half glazed and half panelled door and name the parts. 10
- b. Write short notes on : 10
  - i) Bay Window
  - ii) Dormer Window.

Contd...2

- 9 a. Explain the method of application of paint on;
  - i) New surfaces 10
  - ii) Iron and steel surfaces.
- b. Write a note on :
  - i) Stabilized mud blocks 10
  - ii) Hollow concrete blocks.
- 10 a. List and explain the advantages and disadvantages of prefabricated construction. 10
- b. Write a note on damp proof construction. 10

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