

Roll No

CE - 404**B.E. IV Semester**

Examination, December 2013

Construction Materials And Techniques**Time : Three Hours****Maximum Marks : 70****Note:** Attempt all questions.

1. Solve any three
 - a) Describe qualities of a good building stone.
 - b) Define natural bed of stone and discuss its importance.
 - c) Discuss the process of burning bricks in clamps.
 - d) What is the seasoning of timber. Describe its objectives and methods?
 - e) Describe the various types of tiles, which are used in flooring.
2. a) i) What are the difference between
 - a) Chemical admixture and mineral admixture of concrete.
 - b) Earthenware and Stoneware.
 ii) Write merits and demerits of use of PVC in building.
 iii) What are the advantages of use of fly ash in building?
 OR
 b) i) What are the requirements of a good DPC material.
 ii) Write short notes on:
 - a) Silica fume
 - b) Ground granulated blast furnace slag.
 iii) What is dielectric strength Mention the properties of a good electric insulator?
3. a) i) What is the meaning of bearing capacity of soil. How its value is obtained in field.

- ii) Write short notes on:
 - a) Grillage foundation.
 - b) Raft foundation.
- iii) What is under reamed pile under what situation it used. Give a proportionate sketch of under reamed pile?
 OR

- b) i) What is the meaning of soil stabilization. Describe any one method of soil stabilization in details.
- ii) Draw a neat sketch of well foundation.
- iii) Define underpinning. Discuss in details the pit method of underpinning.

4. Solve any two
 - a) Write short notes on-
 - i) Bay window
 - ii) Sky light window
 - iii) Flush door
 - b) What are the requirements of a good stair case? Draw neat sketch of a typical dog legged stair of RCC.
 - c) Compare brick masonry and stone masonry. Draw plans of alternative course of $1\frac{1}{2}$ brick wall with English bond.
 - d) What is cavity wall? Why it constructed? Draw a neat section of cavity wall.
5. Solve any two:
 - a) What are various types of floors commonly used in residential building? Describe any one in details.
 - b) Draw neat labeled sketch of following:
 - i) Lean to roof
 - ii) Reinforced brick roof
 - c) What is reverberation? How reverberation time evaluated? State the requirements of good acoustic material.
 - d) What are the advantages of thermal insulation of building? How building planning helps in thermal insulation.
