

THIRD SEMESTER DIPLOMA IN ENGINEERING/TECHNOLOGY-- OCTOBER, 2011

**CONSTRUCTION MATERIALS AND ENGINEERING****(Common to CE, AR, QS, EN and WR)**

Time: 3Hrs

Maximum Marks :100

**PART – A**

(Answer all questions in one or two sentences. Each question carries 2 marks)

- I**
1. Mention the classifications of the rocks based on the chemical composition
  2. What is the function of gypsum in OPC ?
  3. Mention any two requirements of enamel paint
  4. Mark the Header, Stretcher and bed faces of a brick.
  5. What is meant by the head room of a staircase ?

**Part – B****II** (Answer any five questions. Each question carries 6 marks)

1. List any six requirements of a good brick
2. What is the significance of workability and water cement ratio in cement concrete
3. What qualities of plastics makes it an good building material
4. What are the different types of glass used in building construction, mention their applications
5. Compare brick masonry with stone masonry
6. List any six causes of dampness in building
7. Compare and contrast flat roof with sloped roof

**Part –C**

(Answer any one full question from each unit. Each question carries 15 marks)

## Module – I

- III**
- 1.Explain the geological classification of rocks. Mention examples for each category. **8**
  - 2.Explain any two tests on cement with respect the IS specifications **7**

**Or**

- IV** 1. What is the procedure for collection, preparation and processing of brick earth **8**  
2. What are the different sources of sand and compare their qualities **7**

**Module - II**

- V** 1. How wood veneers are made ? What are common wood used for making veneers ? **8**  
What are the advantages and uses of veneers.  
2. What properties Cork is made use of as a building material. List different applications **7**  
Cork in building construction

**or**

- VI** 1. What are the constituents of enamel paint? Mention the function of each ingredient. **8**  
2. What are the different types PVC ? Discuss their applications. **7**

**Module – III**

- VII** 1. What is the basic principle behind pre-stressed concrete? Differentiate between **8**  
pre-tensioning and post-tensioning methods.  
2. Compare and contrast English bond and Flemish bond brick bond in masonry **8**

**Or**

- VIII** 1. With the help of a neat sketch explain the functions and requirements of scaffolding and shoring. **8**  
2. How the surface preparation is done for applying plastering on brick masonry? What are the points **8**  
to be kept in mind while doing plastering?

- IX** 1. What are the functions of a foundation **8**  
2. What are the functions of false ceiling? What are the commonly used materials? **7**

**Or**

- X** 1. What are the different types of stair case based on the arrangement of steps? Draw a free hand **8**  
sketch of the arrangement each.  
2. What are the factors to be considered while fixing the positions of doors and windows? **7**