

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING /  
TECHNOLOGY — MARCH, 2015

**CONSTRUCTION MATERIALS AND ENGINEERING**

(Common to CE, AR, QS, EV and WR)

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. How igneous rocks are formed ?
2. List the steps for quarrying of stones by blasting.
3. Enumerate the functions of paint.
4. Define the term 'Daubing'.
5. What is meant by intensity of earthquake.

(5x2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. What are the constituents of good brick earth ? Explain briefly.
2. What is puzzolana ? How puzzolana used as admixture ?
3. State any six properties of plastics.
4. What is an alloy ? Give four examples of an alloy.
5. State the advantages and disadvantages of steel scaffolding.
6. List any six effects of dampness. Explain briefly.
7. What are the requirements for good staircase.

(5x6=30)

## PART—C

(Maximum marks : 60)

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

## UNIT – I

- III (a) Explain different steps for manufacturing of brick. 8  
 (b) Describe briefly geological classification of building stone. 7

OR

- IV (a) Explain briefly the manufacturing of Portland cement by wet process. 8  
 (b) Discuss the major defects of timber. 7

## UNIT – II

- V (a) What are the different bases used for an oil paint ? Explain any two of them. 8  
 (b) What are the general properties and characteristics of plastic. 7

OR

- VI (a) What is an adhesive ? List the main varieties of adhesive. 8  
 (b) Describe the method of manufacturing of fibre board. 7

## UNIT – III

- VII (a) Define composite masonry. What are the advantages of composite masonry. 8  
 (b) Write general principles for earthquake resistant design and construction of building as per IS 4326-1993. 7

OR

- VIII (a) What are advantages and disadvantages of prestressed concrete. 8  
 (b) Enumerate the requirements of good form work. 7

## UNIT – IV

- IX (a) What are the factors to be considered while deciding the location of doors and windows. 8  
 (b) Explain construction procedure of RCC roof. 7

OR

- X (a) State and explain the requirements of good flooring. 8  
 (b) Under what circumstances' pile foundations are provided ? Explain 7