

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY—OCTOBER, 2013

**CONSTRUCTION MATERIALS AND ENGINEERING**

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

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Define the term and common uses of M15 grade of concrete.
2. What are the objectives of preservation of timber ?
3. Difference between thermoplastic and thermosetting plastic.
4. Write any two advantages of steel form work.
5. Define : (i) Ultimate bearing capacity (ii) Safe bearing capacity. (5×2=10)

PART—B

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

1. Briefly describe the physical properties of cement.
2. (a) What is 'slump' of the 'concrete' ?  
(b) How degree of workability related to slump value ?  
(c) Write any two limitations of slump test.
3. Write short notes on the following :  
(i) Bay Window  
(ii) Latern Window  
(iii) Sky light
4. List out the common properties of glass.
5. Compare English bond and Flemish bond.
6. Requirements of good form work.
7. Write short note on well foundation. (5×6=30)

PART—C

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

UNIT – I

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|--|---|
| III (a) Write requirements of a good building stone.         | 8 |
| (b) Write classification of Basic bricks and Neutral bricks. | 7 |

OR

	Marks
IV (a) Classification of lime in the basis of its terminology.	8
(b) What is steel ? Write important properties of high carbon steel.	7
UNIT – II	
V (a) Write any four types of paints and their suitability.	8
(b) With the help of a neat sketch, write outline of manufacture of glass.	7
OR	
VI (a) Explain the steps involved in the application of paint.	8
(b) Write short notes on application of paint on :	
(i) New wood work	
(ii) Previously painted wood work.	7
UNIT – III	
VII (a) List out common defects in plastering.	8
(b) What do you mean by shoring ? Write various types of shoring.	7
OR	
VIII (a) Explain pit method and pile method.	8
(b) Define dampness and explain its causes.	7
UNIT – IV	
IX (a) List out the factors affect the choice of a flooring material.	8
(b) Draw section of steel truss and show :	
(i) Tie (ii) Strut (iii) Purlin (iv) Gusset plate.	7
OR	
X (a) Write brief notes on : (i) Filler joists floors (ii) Pre-cast concrete floors.	8
(b) Draw an arch and show :	
(i) Intrados	
(ii) Pier	
(iii) Abutment	
(iv) Rise	
(v) Extrados.	7

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