

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2014

CONSTRUCTION MATERIALS AND ENGINEERING

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

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

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

1. What is meant by 'workability' ?
2. Write any two functions of sand in mortar.
3. What are the functions of glass in civil engineering constructions ?
4. Explain the terms :
 - (i) Valley
 - (ii) purlins in pitched roof
5. Draw neat sketches of any two isolated footings. (5×2=10)

PART—B

(Maximum marks : 30)

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

1. Write general requirements of good aggregate.
2. (i) Define water cement Ratio.
(ii) Write the functions of water in concrete.
3. Write short note on Oil paint.
4. List out the moulding components of plastic.
5. Compare plaster slab partitions and wood wool partition.
6. Explain plastering and pointing.
7. Show the section of a stair with its components. (5×6=30)

PART—C

(Maximum marks : 60)

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

UNIT—I

- | | | |
|-----|--|---|
| III | (a) Write factors considered in the location of quarrying site. | 8 |
| | (b) Write experimental procedure of specific gravity test of cement. | 7 |

OR

- IV (a) Write short notes on :
 (i) Lime concrete (ii) Cement concrete 8
 (b) What is seasoning of timber ? 7

UNIT—II

- V (a) Write short notes on :
 (i) Synthetic resin (iii) Turpentine 8
 (ii) Thinner (iv) White spirit 8
 (b) Write advantages of plastic. 7

OR

- VI (a) Give an outline of paint manufacture. 8
 (b) Describe the term 'vehicle' in paint and list out its uses. 7

UNIT—III

- VII (a) Write short note on different type of joints in stone masonry. 8
 (b) Differentiate between brick layers scaffold and masons scaffold. 7

OR

- VIII (a) Compare suspended scaffolding and steel scaffolding. 8
 (b) Discuss and write about under pinning and give its purposes. 7

UNIT—IV

- IX (a) Write short notes on :
 (i) Stepped footing (ii) Adjacent footing 8
 (b) Explain the construction procedure of Mosaic flooring. 7

OR

- X (a) Differentiate between Helical and spiral stair. 8
 (b) Explain the construction procedure of marble flooring. 7
