

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

CONSTRUCTION MATERIALS AND ENGINEERING

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define natural bed of rock.
2. Write the initial and final setting of ordinary Portland cement.
3. Write the use of abrasives.
4. Define composite masonry.
5. List types of arches.

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Write the characteristics of good brick used for building purpose.
2. Explain physical classification of rocks with examples.
3. Write short notes on :
(i) veneers (ii) plywoods
4. Describe thermoplastics and thermosetting plastics.
5. Explain plastering and pointing.
6. Discuss the pretensioning methods of prestressing of concrete.
7. Write the requirements of a good stair.

(5 × 6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) Explain burning of bricks in Hoffman's kiln. 8
 (b) Write short notes on :
 (i) Water cement ratio (ii) Workability.

OR

- IV (a) Explain the wet process of manufacturing of cement. 8
 (b) (i) Define preservation of timber.
 (ii) List the types of preservatives used for preservation of timber. 7

UNIT — II

- V Write short notes on :
 (i) Rubber 5
 (ii) PVC 5
 (iii) Plaster of Paris 5

OR

- VI (a) Write the properties and uses of enamel paint. 8
 (b) List the characteristics of good varnish. 7

UNIT — III

- VII (a) Explain English bond and Flemish bond. 8
 (b) Describe earth quake resistant construction. 7

OR

- VIII (a) Compare stone masonry and brick masonry. 8
 (b) List the causes and effects of dampness. 7

UNIT — IV

- IX (a) Explain shallow and deep foundation with examples. 8
 (b) Describe couple and couple closed roof with sketches. 7

OR

- X (a) Explain (i) Dormer windows (ii) Bay windows 8
 (b) Enumerate the points to be kept in mind while selecting the flooring material. 7