

**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 question carries 2 marks.

1. What is meant by “dressing of stone” ?
2. Define the term “mortar”.
3. Define the term “flemish bond”.
4. What is composite masonry ?
5. What is meant by pitch of the roof ? (5×2 = 10)

**PART — B**

(Maximum marks : 30)

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

1. Why is preservative treatment necessary for timber ?
2. What are the characteristics of a good brick ?
3. What are the main functions of painting ?
4. What is workability ? What are the factors affecting workability ?
5. Define :
 

(i) Lap	(ii) Corbel
(iii) Soffit	(iv) Closer
6. Sketch a detailed sectional view of a pre-cast concrete lintel cum sunshade.
7. Write short notes on pile foundation. (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) How rocks are physically classified ? 5  
 (b) Explain how burning of brick is done in a kiln. 10

OR

- IV (a) What are the constituents of good brick earth ? Explain briefly. 5  
 (b) Discuss the major defects of timber. 10

## UNIT — II

- V (a) What are the properties of aluminium ? 8  
 (b) State the characteristics of an ideal varnish. 7

OR

- VI (a) Explain the procedure of how paint is applied on wood surface. 8  
 (b) What is asbestos ? What are the properties of asbestos ? 7

## UNIT — III

- VII (a) Define the terms king closer and bevelled closer with sketches. 6  
 (b) Distinguish between Brick masonry and Stone masonry. 9

OR

- VIII (a) Explain the various causes of dampness. 6  
 (b) Explain in detail the various types of pointing. 9

## UNIT — IV

- IX (a) What is the function of lintel ? What are the various types ? 8  
 (b) Show the section of a stair with its components. 7

OR

- X (a) Write short notes on :  
 (i) Raft or mat foundation. 8  
 (ii) Combined footing. 8  
 (b) Define an 'arch'. Write any five classification of arch according to the shape of arch. 7