

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY — APRIL, 2017

CONSTRUCTION MATERIALS AND ENGINEERING

(Common to CE and AR)

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Identify four clay products.
2. Define bulking of sand.
3. Distinguish between asphalt and bitumen.
4. Differentiate shoring and underpinning.
5. State "lean-to roof".

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe quarrying by blasting.
2. State the ISI specifications for bricks.
3. Explain the process of painting on new steel works.
4. Discuss the parts of a building.
5. List the types of partitions.
6. Describe the construction of cement concrete flooring.
7. Sketch and mark the parts of a segmental arch.

(5×6 = 30)

[P.T.O.]

## PART — C

(Maximum marks : 60)

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

## UNIT — I

- III (a) Describe dry process of manufacturing cement. 8  
 (b) List the sources of sand and its requirements. 7

OR

- IV (a) Define workability. List the factors affecting workability. 8  
 (b) State the uses of mild steel. 7

## UNIT — II

- V (a) Enumerate the characteristics of an ideal paint. 8  
 (b) Specify the types of wood product and its uses. 7

OR

- VI (a) Explain the properties of thermal insulating materials. 8  
 (b) Discuss the types of plastics. 7

## UNIT — III

- VII (a) Illustrate the peculiarities of English bond. 8  
 (b) Discuss the material used for damp proofing. 7

OR

- VIII (a) State the advantages and disadvantages of plant pre fabrication. 8  
 (b) Identify the types of pointing with sketches. 7

## UNIT — IV

- IX (a) Outline the requirement of a good floor. 8  
 (b) Distinguish the parts of a panelled door. 7

OR

- X (a) Differentiate King post truss and Queen post truss. 7  
 (b) Enumerate the requirements of a good staircase. 8