

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

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. Define bulking of sand.
2. List the functions of alumina and silica in brick earth.
3. Define fibre boards.
4. Define shoring.
5. Differentiate between a mullion and a transom.

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe the characteristics of a good tile.
2. List the properties of asbestos.
3. Define cork. List its uses.
4. List the effects of dampness.
5. List the requirements of partition wall.
6. Enumerate the rules for locating doors and windows.
7. State the requirements of ceiling materials.

(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) Draw a flow diagram showing dry process of manufacture of ordinary Portland cement. 8
- (b) Discuss the geological classification of building stones. 7

OR

- IV (a) Define seasoning of timber. List its requirements. 8
- (b) Discuss the factors affecting workability of concrete. 7

UNIT — II

- V (a) Enumerate the properties of rubber. 8
- (b) State the limitations of plastics. 7

OR

- VI (a) List the advantages of plywood. 8
- (b) Discuss the functions of various constituents of an oil paint. 7

UNIT — III

- VII (a) Define English bond and Flemish bond and bring out the differences between them. 8
- (b) Discuss the various types of prestressing. 7

OR

- VIII (a) Discuss the merits and demerits of steel formwork over timber form work. 8
- (b) Explain the defects in plastering. 7

UNIT — IV

- IX (a) Define : (i) Voussoirs (ii) Spandril (iii) Springing point (iv) Striking point. 8
- (b) List the objectives of foundation. 7

OR

- X (a) Explain with neat sketches (i) Dog-legged stairs (ii) Quarter turn stairs. 8
- (b) List the advantages of R.C.C. flat roof. 7