

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2020**

CONSTRUCTION MATERIALS AND ENGINEERING

[Maximum Marks: 75]

[Time: 2.15 Hours]

PART-A

(Answer *any three* questions in one or two sentences. Each question carries 2 marks)

- I. 1. Differentiate between fine aggregates and coarse aggregates.
2. Define quick lime and slaked lime.
3. List the functions of bases in paints.
4. Define underpinning.
5. Differentiate between hip and valley. (3 x 2 = 6)

PART-B

(Answer any *four* of the following questions. Each question carries 6 marks)

- II 1. Explain slump test.
2. List the properties of distempers.
3. Classify different types of varnish and briefly describe them.
4. State the requirements of a good formwork.
5. List the advantages of hollow block masonry.
6. Write short notes on (i) Revolving door (ii) Dormer window and (iii) Rising butt hinge.
7. Enumerate the requirements of a good stair case. (4 x 6 = 24)

PART-C

(Answer *any of the three units* from the following. Each full question carries 15 marks)

UNIT – I

- III (a) List the qualities of good bricks. (8)
(b) Define bulking of sand. Explain its importance. (7)

OR

- IV (a) Discuss the various stages of concrete production. (8)
(b) List the properties of mild steel. (7)

UNIT – II

- V (a) Explain the following types of glasses used in building construction.
(i) Float glass (ii) Laminated glass (iii) Tinted glass (iv) Glass blocks. (8)
(b) List the properties of PVC. (7)

OR

- VI (a) List the properties of plaster of paris. (8)
(b) Define asphalt. Mention its properties. (7)

UNIT- III

- VII (a) Define bonding in brick masonry. List the rules for bonding in brick masonry. (8)
(b) Describe the causes of dampness in buildings. (7)

OR

- VIII (a) Explain the different types of pointing. (8)
(b) Mention the situations which demand shoring and under pinning. (7)

UNIT - IV

- IX (a) Explain with neat sketches: (i) Combined footing (ii) Cantilever footing. (8)
(b) Describe with neat sketches: (i) Relieving arch (ii) Venetian arch. (7)

OR

- X (a) Define (i) Gable roof (ii) Ridge piece (iii) Jack rafters (iv) Battens (8)
(b) List the factors to be considered in the selection of ceiling materials. (7)
