

Total No. of Questions—12]

[Total No. of Printed Pages—4+2

Seat No.	
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[4657]-2

S.E. (Civil) (First Semester) EXAMINATION, 2014

BUILDING MATERIALS AND CONSTRUCTION

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 100

- N.B. :—** (i) Attempt Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6 from Section I and Q. No. 7 or Q. No. 8, Q. No. 9 or Q. No. 10, Q. No. 11 or Q. No. 12 from Section II.
- (ii) Use separate answer-sheet for Section I and Section II.
- (iii) Figures to the right indicate full marks.
- (iv) Assume suitable data, if necessary.

SECTION I

1. (a) Explain clearly the importance of plinth filling. [5]
- (b) Differentiate between End Bearing and Under-reamed pile foundation. [6]
- (c) Explain the essence of providing bonds in the brickwork. [5]

P.T.O.

Or

- 2.** (a) What is DPC ? Explain the general principles followed for DPC. [5]
- (b) Describe the following with sketches : [6]
- (i) Header
- (ii) Course
- (iii) Perpend
- (iv) Coping.
- (c) State the precautions to be taken for the brickwork. [5]
- 3.** (a) State the advantages of Reinforced Brickwork and its applications. [5]
- (b) Explain in detail “Column Forms”. [6]
- (c) State different curing methods and explain any *one* of them. [5]

Or

- 4.** (a) Write a note on “Cavity wall construction”. [5]
- (b) Explain in detail “Expansion and Contraction joints”. [6]
- (c) State different causes of failure of the formwork and the necessary action. [5]

5. (a) Write short notes on : [6]
(i) Hollow Block and Rib Floor
(ii) Cork Floor.
- (b) Write a short note on “Construction details of concrete floor”. [6]
- (c) Compare between “A.C. and G.I. sheets”. [6]

Or

6. (a) State the functional requirements of flooring and mention the tests to be conducted on tiles. [6]
- (b) Explain the following terms : [6]
(i) Eaves
(ii) Valley
(iii) Ridge Piece
(iv) Cleats.
- (c) Write a short note on “Space Frames”. [6]

SECTION II

7. (a) Explain the following with sketches : [6]
(i) Arch
(ii) Lintel
(iii) Nar-madi.

(b) Explain the necessity of fixtures and fastenings in doors and windows. [6]

(c) Define painting. Explain defects in painting. [6]

Or

8. (a) Define the following : [6]

(i) Spandril

(ii) Hold-fast

(iii) Horn.

(b) State the different types of locks. Explain Bay windows in detail. [6]

(c) Explain the detailed procedure of plastering. Give explanatory sketch. [6]

9. (a) Describe the following terms with labelled sketches : [6]

(i) Pitch

(ii) Nosing

(iii) Scotia

(iv) Rise.

(b) Comment the safety precautions in the construction of Apartment Building. [6]

(c) Write a short note on flying shores. [4]

Or

- 10.** (a) Give the plan of dog-legged stair and explain step by step design procedure of dog-legged star. [6]
- (b) Write short notes on : [6]
- (i) Demolition of high rise building in crowded area
- (ii) Escalators.
- (c) What is shoring and strutting ? Explain cantilever needle beam method. [4]
- 11.** (a) Write short notes on : [6]
- (i) Plaster of Paris
- (ii) Artificial stone
- (iii) Veneers.
- (b) Explain engineering properties of the following building materials : [6]
- (i) Gypsum
- (ii) Aluminium
- (iii) Glass.
- (c) Define seasoning. Explain radial shakes with sketch. [4]

Or

- 12.** (a) Draw neat and labelled sketch (section) of Indian type w.c. pan. [6]
- (b) State defects in timber. Explain air seasoning. [4]
- (c) Explain the following : [6]
- (i) Slaking of lime
- (ii) Glass cladding.