

Total number of printed pages-4

53 (CE 304) BMTc

2016

**BUILDING MATERIALS
AND CONSTRUCTION**

Paper : CE 304

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

*Answer question No. 1 and any four
from the rest.*

1. Answer the following : 20
- (i) Why the sloping sides of a clamp is covered with mud plaster ?
 - (ii) Why the flare kiln is considered to produce lime of better quality ?
 - (iii) What is the purpose of soundness test in cement ?

Contd.

- (iv) How workability and durability properties are related with strength of concrete ?
 - (v) At what situation strap footing is provided ?
 - (vi) What are the three points on which a rafter is supported ?
 - (vii) What is the basic difference between dancing and winder steps ?
 - (viii) How the bearing of a lintel is provided ?
 - (ix) Name the *three* basic elements of a roof truss.
 - (x) What is mansard roof truss ?
2. (a) Describe the different methods of quarrying of stones and their application under varying geological condition. 14
- (b) How the clay is prepared for manufacturing of tiles ? 6

3. (a) What should be an ideal composition of good brick earth or clay? How does each ingredient affect the properties of bricks? 12
- (b) Enumerate the sources of lime and give its classifications. 8
4. (a) With the help of suitable diagram show Flemish and English bonds in brick masonry work. 6
- (b) Describe the process of manufacture of cement by wet process. 14
5. (a) What are the ingredients of cement? Explain the functions of each ingredient. 10
- (b) What are the basic constituents of concrete and mortar? 2
- (c) What are the objectives of mortar? Discuss the various types of mortar. 8
6. (a) How and why toothing and racking is provided in brick work? 4

- (b) Define combined footing and discuss its types. 8
- (c) Discuss *any two* types of masonry work. 8
7. (a) What is the basic difference between lintel and arches? With a suitable diagram discuss its component parts. 10
- (b) What are segmental and semicircular arches? Give suitable diagram. 5
- (c) Enlist the factors on which the selection of roofing material depends. For what purpose roofing materials are provided? 5
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