

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0022

Roll No.

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B. Tech
(SEMESTER-III) THEORY EXAMINATION, 2012-13
BUILDING MATERIALS & CONSTRUCTION

Time : 3 Hours]

[Total Marks : 100

Section – A

1. Attempt **all** parts. Each part carries equal marks.

10 × 2 = 20

- (a) What are rock forming materials ?
- (b) Write short notes on the following :
- (i) Luster
 - (ii) Cleavage
 - (iii) Hardness
 - (iv) Steak
- (c) How are plastics classified ?
- (d) What is meant by term P.V.C.N ?
- (e) Discuss the causes and effects of dampness.
- (f) What are the factors which affect the choice of flooring material ?
- (g) Give a list of different types of door and windows.
- (h) Define the following term :
Architrave, louver
- (i) What are the requirements of good plaster ?
- (j) Mention the tools which are required in the plastering work.

Section – B

2. Attempt any **three** parts. Each part carries equal marks. **3 × 10 = 30**
- (a) (i) What are the important considerations which are to be carefully attended before selecting a quarry site ?
- (ii) Describe the process of blasting rocks.
- (b) Describe the procedure of following :
- (i) Painting of new wood work
- (ii) Painting of an old iron work
- (iii) Distemping
- (iv) Varnishing
- (c) Differentiate between the following :
- (i) Dry wood termites and subterranean termites
- (ii) Damp proofing and termite – proofing
- (iii) Soil insecticides and structural barriers
- (iv) Damp proofing and water – proofing
- (v) Hot bitumen and mastic asphalt.
- (d) Explain, with neat sketches the construction of flush doors.
- (e) Why is lath used in plaster ? Explain the use of metal laths and wooden laths in plastering.

Section – C

Attempt **all** questions. Each questions carries equal marks. **5 × 10 = 50**

3. Attempt any **two** parts of the following : **2 × 5 = 10**
- (a) Briefly describe the following tests on stones : (a) durability test (b) crushing test (c) shear strength test. Also, state the significance of each of them.
- (b) Name the various types of stones which are used for building works and give in brief the specifications for a good building stone.
- (c) Describe the various weathering agencies responsible for deterioration of stones. Suggest the precautions to be exercised to reduce the decay of stones caused by these.

4. Attempt any **one** part of the following : 1 × 10 = 10
- (a) What are factors to be considered for successful application of paint on cement plastered surfaces and also enumerate the properties of distempers ?
 - (b) Explain the different types of paints. Discuss the important points to be noted before the process of painting is started.
5. Attempt any **one** part of the following : 1 × 10 = 10
- (a) Describe the procedure which is adopted for providing damp – proof course in an existing wall.
 - (b) Briefly describe the construction of terrazzo flooring.
6. Attempt any **one** part of the following : 1 × 10 = 10
- (a) Describe, with neat sketches, how mosquito-proofing to doors, windows and ventilators, is provided.
 - (b) Explain the meanings of the following designations as recommended by the BIS : 8 DS 20; 10 DT 21; 12 DT 21; 6 WS 12; 10 WT 13; 12 V 6
7. Attempt any **two** parts of the following : 5 × 2 = 10
- (a) Briefly describe how the plaster with cement mortar and lime mortar is carried out in three coats.
 - (b) What are the fibrous plaster boards ? Describe the process of making fibrous plaster boards.
 - (c) What is pointing ? How is it carried out ? What are its different types ?
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