

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

Paper ID [A0603]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 3rd)

BUILDING MATERIALS (CE - 205)

Time : 03 Hours

Maximum Marks :60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) Classify the following stone and give their specific use in building construction:
(i) Granite (ii) Sandstone (iii) Marble (iv) Slate
- b) How are bricks classified? How do they differ in compressive strength?
- c) Differentiate between hydraulic lime and fat lime.
- d) What is Reinforced cement concrete? What are its advantages over Plain Cement Concrete?
- e) What is the importance of slump test? How do you interpret the results?
- f) What is meant by voids in fine aggregate? How is it measured?
- g) Differentiate between exogenous and endogenous stress. How does the quality of timber vary?
- h) Distinguish between white washing and distempering.
- i) Define sheet glass and plate glass? Give their uses.
- j) What is bitumen? How is it obtained on a commercial scale?

Section - B

(4 × 5 = 20)

- Q2) What is meant by Natural bed in stones? Explain its importance in construction.
- Q3) Describe the compression strength test and water absorption test in ascertaining the quality of brick.
- Q4) Explain the terms:
- (a) Real mix.
 - (b) Field mix.
 - (c) Nominal mix.
- Q5) Describe two methods of seasoning of timber.
- Q6) How do you proceed to paint on an old work? What is meant by covering power of the paint?

Section - C

(2 × 10 = 20)

- Q7) A bungalow with open verandah and flat roof is to be constructed in Punjab. Write briefly about the materials you specify for the following parts of the building giving reasons for your choice:
- (a) Foundation.
 - (b) Superstructure masonry with pillar.
 - (c) Lintel.
 - (d) Roof.
 - (e) Floor.
- Q8) Describe the importance of the following in RCC work.
- (a) Water Cement Ratio.
 - (b) Compaction of concrete.
 - (c) Curing of the concrete.
 - (d) Fineness modulus.
 - (e) Bulking of sand.
- Q9) Write short notes on:
- (a) Asphalt.
 - (b) Artificial stones.
 - (c) Efflorescence.
 - (d) Creep and shrinkage of concrete.