

B.Tech. (Sem. - 3rd)
BUILDING MATERIALS
SUBJECT CODE : CE - 205

Paper ID : [A0603]

[Note : Please fill subject code and paper ID on OMR]

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 x 2 = 20)

- a) Name any 4 building stones of India? Give their classification.
- b) What is frog? What are its functions in bricks?
- c) What is meant by glazing? Why is it important in clay products?
- d) Differentiate between quick setting cement and rapid hardening cement.
- e) Describe two field tests to evaluate the quality of cement supplied to the site.
- f) What is the importance of slump test? How do you interpret the results?
- g) What is meant by durability and permeability of concrete?
- h) What is seasoning? How is it necessary in timber?
- i) Differentiate between paints and varnishes.
- j) What is meant by artificial asphalt? What is its use?

Section - B

(4 x 5 = 20)

- Q2) What is meant by Natural bed in stones? Sketch how the natural bed of a stone placed in walls and in arches?
- Q3) What are the characteristics of clay for the manufacture of good bricks? How does the composition of clay affect the quality of brick?
- Q4) Give the classification and properties of different types of lime.
- Q5) What are precautions required for storing cement?
- Q6) How do you evaluate the quality of building sand?

Section - C

(2 x 10 = 20)

- Q7) What do you understand by voids? How can it be measured? An RCC roof measures 3 m x 4m. The fine and coarse aggregates have 30 and 40 per cent voids, respectively. Find in m^3 , the quantities of different materials required for the construction, if the it is made of 1:2:4 concrete.
- Q8) Explain the use of the following in paints.
- | | |
|------------------------|-------------|
| (a) Base | (b) Vehicle |
| (c) Solvent | (d) Drier |
| (e) Colouring pigment. | |

Also, identify common materials used for the purpose.

- Q9) Write short notes on the following:

- | | |
|-----------------------------|-------------------------------|
| (a) Preservation of Timber. | (b) Fineness modulus of sand. |
| (c) Priming | (d) Ground glass. |

