

B.Arch. First Semester (CGS)
10001 : Building Material & Construction - I : 01 AR 01

P. Pages : 2

Time : Four Hours



AV - 2599

Max. Marks : 80

- Notes :
1. All question carry equal marks.
 2. Answer **four** question.
 3. Question No. **three** is compulsory.
 4. Due credit will be given to neatness and adequate dimensions.
 5. Assume suitable data wherever necessary.
 6. Illustrate your answer necessary with the help of neat sketches.
 7. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) State the importance of foundation in the building construction. Draw neat sketches of simple type of load bearing foundation for brick masonry wall and pier. 7
b) What is bearing capacity of soil and how will you increase the Bearing capacity of soil? 6
c) State the importance of bond in brick masonry and describe with neat sketches the header bond and stretcher bond in brick masonry. 7

OR

2. a) Describe with neat sketches of English and Flemish bond. 6
b) Compare between brick masonry and stone masonry. 6
c) Draw plan, elevation and section of single Flemish Bond in 1:50 scale (1:50) 8
3. Describe with neat sketches any five of the following: 20
 - i) Clay products.
 - ii) Uses of stone
 - iii) Plinth filling material.
 - iv) Process of quarrying of stone
 - v) Rebated and cramped joint in stone masonry.
 - vi) Decorative brick and Jali work
 - vii) Standard Brick with frog and dimension.
 - viii) Stretcher course
4. a) Explain neat sketches: 5
 - i) King closer and queen closer
 - ii) D.P.C.
 - iii) Mitred closure
 - iv) Plinth
 - v) Corbel

- b) Describe with neat sketches the various methods adopted for preservation of stone. 7
- c) What do you know about Rubble masonry and Ashlar masonry: How they are further classified? 8

OR

AV - 2599

1

P.T.O

- | | | | |
|----|----|--|---|
| 5. | a) | Describe with neat sketches, the working of Hoffman's Kiln. | 8 |
| | b) | Explain various types of Bricks with the help of neat and labelled sketches. | 6 |
| | c) | Explain the use of brick in building construction and state the characteristics of first class bricks. | 6 |
| 6. | a) | Describe with neat sketches "Mud as a Building Material". | 7 |
| | b) | Explain with neat sketches the various types of Materials used for Lintels. | 6 |
| | c) | Explain with neat sketches the Brick and stone arche's | 7 |

OR

- | | | | |
|----|----|--|---|
| 7. | a) | Draw simple type of foundation for stone masonry wall and stone pier and show how they are distributing load of foundation soil. | 8 |
| | b) | What is meant by 'Rat-Trap' bond? Under which circumstances is it adopted? state its advantages and disadvantages. | 6 |
| | c) | Describe with neat sketches. How arche's are classified according to shape? | 6 |
