

AU – 2540

Third Semester B. Arch. (CGS) Examination

BUILDING MATERIALS AND CONSTRUCTION - III

Paper – 3 AR 02

(USC – 10020)

P. Pages : 3

Time : Four Hours]

[Max. Marks : 80

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- Note :** (1) All question carry marks as indicated.
(2) Answer **Four** questions.
(3) Question no. **Five** is compulsory.
(4) Due credit will be given to neatness and adequate dimensions.
(5) Assume suitable data wherever necessary.
(6) Illustrate your answer wherever necessary with the help of neat sketches.
(7) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (a) A T. W. timber floor is to be provided for a hall having dimension 5.0 m x 9.0 m. Draw to a suitable scale it's plan, cross section showing the placement of all required supporting members and important structural detail in enlarged scale ? 14
- (b) Explain Herring bone and solid bone strutting. 6

OR

2. (a) Describe with the help of neat sketche's the different types of timber floors state it's advantages and disadvantages. 12
- (b) Explain with neat sketches the sound-proofing of timber floor ? 4
- (c) Define the term ;
- (i) Girder
- (ii) Wall plate. 4
3. (a) Draw to a suitable scale a sectional Elevation of single storied Residential bungalow with load-bearing foundation. Show different elements of building from roof to foundation and explain how load distribution take's place ? 10

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- (b) Differentiate between shallow foundation and deep foundation ? 6
- (c) State the purpose of Foundation ? 4

OR

4. (a) Explain the "False ceiling" its purpose, use, materials used for false ceiling also Draw plan and sectional elevation of a conference hall admeasuring 5.0 m x 8.0 m with false ceiling along with fixing detail ? 12
 - (b) Draw plan and sectional elevation of R. C. C. column with Footing show its different parts. 5
 - (c) State the uses of cement ? 3
5. Describe with neat sketches any **Four** of the following :—
 - (1) Manufacturing ordinary portland cement by dry process.
 - (2) Water-cement ratio
 - (3) Classification of mortar according to binding materials
 - (4) P. C. C. and R. C. C.
 - (5) Varieties of cement
 - (6) Curing of concrete
 - (7) Advantages and disadvantages of load -bearing and framed structures. 20
 6. (a) What do you know about the term "form work" why it is to be provided describe with neat sketches the form work for different building components? 11
 - (b) Draw neat sketch of eccentric footing (oneside footings) under which circumstances it is provided ? 5
 - (c) Explain the term "Bulking of sand". 4

OR

7. (a) Draw plan and sectional elevation of steel Grillage foundation ?
(Assume suitable scale) 7
- (b) State the advantages and disadvantages of steel form work over timber form work ? 8
- (c) State the properties of concrete. 5

