

B.Arch. Third Semester (Architectural Engineering) (CGS)
10020 : Building Materials of Construction – III
03 AR 02

P. Pages : 2

Time : Four Hours



AV – 2656 Add

Max. Marks : 80

- Notes :
1. All question carry equal marks.
 2. Answer **four** question.
 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 necessary with the help of neat sketches.
 7. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Describe with neat sketches the various types of T. W. Floors state its advantages and disadvantages? **12**
b) Describe with neat sketches the solid bone and Herringbone strutting under which circumstances it is provided? **4**
c) Explain the “Sound proofing” of timber floor? **4**

OR

2. a) By assuming suitable span design and draw to a suitable scale plan, showing placement of various members, cross section and important fixing details of a double joist timber floor? **10**
b) Explain how timber construction is eco-friendly construction? Give justification of answer? **4**
c) Define the term : **6**
i) Girder
ii) Bridging joist
iii) Wall plate
3. a) State the advantages and disadvantages of load bearing foundation and framed foundation? **7**
b) Draw sectional elevation of a load bearing foundation for a simple residential building showing it's different component from foundation to roof and explain how load has been transmitted to the foundation from super structure? **10**
c) What are the object of foundation? **3**

OR

4. a) What is “False Ceiling” why it is to be provided and explain the various types of materials used for false ceiling? Draw to a suitable scale plan, sectional elevation and fixing details of a false ceiling provided for a drawing hall having size 4.0m×6.50m . (Assume suitable dimension wherever necessary) **11**

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- b) What is meant by the term “water cement ratio” state its importance. 4
- c) Draw sectional elevation of R.C.C. column with column footing and show its different parts? 5
5. Describe with neat sketches **any four** of the following : 20
- 1) Types of mortars.
 - 2) Manufacturing of ordinary Port-land cement by dry – process.
 - 3) Bulking of Sand.
 - 4) Concrete’s and it’s ingredients.
 - 5) Varieties of cements.
 - 6) Curing of concrete.
 - 7) Properties of concrete.
 - 8) Shallow & Deep Foundations.
6. a) Explain the term ‘Formwork’ why it is to be provided. Explain why steel formwork is more popular than timber formwork? 8
- b) Describe with neat sketches the different types of column footings also explain under which circumstances they are suggested? 7
- c) State the precaution to be taken during placing of concrete? 5
- OR**
7. a) Describe with neat sketches the “formwork” for different component of the building? 10
- b) State the precaution to be taken while providing the formwork? 5
- c) Explain with neat sketch : 5
- 1) Slump test
 - 2) Vibrators
