

Sub: Materials and Methods of Construction-II (AR 302)

3rd Semester Examination

Full Marks: 70

Answer any five questions

Time: 3hrs.

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1. (a) What is the difference between Ultimate Bearing Capacity and Safe Bearing Capacity of Soil? 3
(b) Explain with sketch differential settlement in a building. 5
(c) What is the difference between isolated footing and combined footing? Explain with sketches. 6
2. (a) Explain with sketch the damp proof treatment for basement in normal soil. 4
(b) Explain with sketch the damp proof treatment for basement in soil with high water table. 5
(c) Explain with sketch the damp proof treatment for basement in highly damp soil. 5
- 3.(a) Explain with sketch different parts of a Two- Centered Arch. 5
(b) What are the advantages of Lintel compared to arch in building construction? 3
(c) Explain with sketch the construction of Brick Lintel and Reinforced Brick Lintel 6
- 4.(a) Explain with sketch the construction principle of a two way RCC slab. 5
(b) What are the advantages of a Flat Slab Floor compared to conventional RCC floor. 4
(c) Explain with sketch the construction principle of a Flat Slab Floor. 5
- 5.(a) Explain the determinants of shape of roof in a building. 4
(b) Explain with sketch the difference between Gable Roof and Gambrel Roof. 5
(c) Indicate the following parts of slope roof in a three dimensional view of such a roof: Ridge, Eaves, Hip, Valley and Verge. 5
6. Explain with sketch the difference in structural principles taking one example each from a Single Roof and Double Roof. 14