

INDIAN INSTITUTE OF TECHNOLOGY
Kharagpur

Date..... FN/AN Time 3 Hrs . Full Marks 100 No. of Students 32

End-Semester Dept. Architecture & Regional Planning Sub. No. AR 32003

III Yr.B.Arch (H) Sub. Name: Specification

Answer any FIVE Questions

- Q. 1. Give particle shape classification of fine aggregates with suitable examples. 4
 Classify coarse, medium and fine sand and give the suitability of each type. 4
 What is the significance of 'bulking' of sand? 4
 What are impurities in sand, how can you detect impurities in sand? 4
 Give the particle size grading of sand for use in unreinforced masonry work. 4
- Q.2. What are the sources of lime? 4
 Explain the chemical reactions associated with calcination of lime stone and
 slaking of quick lime. 4
 What chemical reactions take place when hydrated lime comes in contact with carbon
 dioxide? 4
 What is the difference between fat lime and hydraulic lime? 4
 How is hydraulic lime classified and what is the use of each type? 4
- Q.3. Write specification clauses for **any two** of the following items of work including description,
 materials, inspection, preparation, curing and workmanship as required: (10+10 = 20)
 a) Cement Concrete in foundation.
 b) In-situ Terrazzo flooring
 c) Lime Concrete in foundation
 d) Artificial stone flooring
- Q. 4. Write short notes on the following: (4 x 5 = 20)
 a) Constituents of paint
 b) Different types of paint
 c) Defects in paint
 d) Re-painting of old iron-work
 e) Painting of new wood-work
- Q. 5. What are the major constituents of cement? 4
 Describe four different types of cement with their suitability. 8
 Explain the phenomenon of setting of cement. 4
 What is the difference between setting and hardening of cement? 4
- Q. 6. Write the detailed specifications for the following items of work: (5 x 4 = 20)
 a) Flag-stone Flooring
 b) Cork tile flooring on existing wood floor
 c) Earthwork in excavation of foundation trenches
 d) Terrace flooring over brick flat.
- Q. 7. Explain the process 'Invitation to Tender' by private invitation, public notice and
 negotiations. 10
 What do you mean by Earnest money, Mobilisation fund, Demolition tender and
 Lump-sum tender? 10