**17CE41P1 -CONCRETE TECHNOLOGY LABORATORY**

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| **Course Category**  | Professional Core | **Credits**  | 2 |
| **Course Type**  | Laboratory | **Lecture - Tutorial - Practical**  | 0 - 0 - 3 |
| **Prerequisite**  | Concrete Technology, Building Technology | **Sessional Evaluation**  | 40 |
|  **Semester End Exam Evaluation**  | 60 |
| **Total Marks**  | 100 |

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| **Course Objectives** | 1. To know the concept and procedure of different types of tests conducted on cement, aggregate and finished concrete.
2. To understand the procedure of designing the concrete mix of given specification of its ingredients along with appropriate water cement ratio and admixtures.
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| **Course Outcomes** | CO1 | Evaluate the physical properties of cement. |
| CO2 | Determine the physical properties of aggregates. |
| CO3 | Evaluate the fresh and hardened properties of concrete. |
| CO4 | Assess the physical and mechanical properties of bricks. |
| **Course Content** | **LIST OF EXPERIMENTS****CEMENT**1. Fineness by dry sieving
2. Normal consistency, initial & final setting times
3. Specific gravity
4. Compressive Strength

**AGGREGATES**1. Specific gravity and water absorption of coarse and fine aggregates
2. Sieve analysis of coarse and fine aggregates
3. Bulking of sand by volume method
4. Bulking of sand by weight method
5. Bulk density

**CONCRETE**1. Workability of fresh concrete by slump test
2. Workability of fresh concrete by compaction factor test
3. Workability of fresh concrete by Vee-Bee test
4. Workability of fresh mortar by flow table test
5. Compressive strength

**BRICKS**1. Compressive strength
2. Water absorption
3. Efflorescence
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