

**Maulana Abul Kalam Azad University of Technology, West Bengal**  
(Formerly West Bengal University of Technology)

**Syllabus for B. Tech in Civil Engineering**  
(Applicable from the academic session 2018-2019)

<b>CE(PC)494</b>	<b>Concrete Technology Laboratory</b>	<b>2P</b>	<b>1 Credits</b>
<b>Course Outcome</b>	On completion of the course, the students will be able to: <ol style="list-style-type: none"> <li>1. Demonstrate the method and findings of tension and compression tests on concrete.</li> <li>2. Understand the concepts of different test on hardened concrete.</li> <li>3. Calculate the specific gravity of concrete ingredients.</li> <li>4. Find out the mix proportion of high grade of concrete.</li> <li>5. Measure the workability of concrete mix.</li> <li>6. Know about the quality of concrete.</li> <li>7. Understand the different properties of cement.</li> </ol>		
<b>Prerequisite</b>	Concrete Technology CE(PC)404		
<b>Test on Fine aggregates</b>	Bulking, Specific gravity, Bulk Density, Percentage voids, Fineness Modulus. Grading curve.		
<b>Test on Coarse aggregates</b>	Specific gravity, Bulk Density, Percentage voids, Fineness Modulus. Grading curve.		
<b>Test on Cement</b>	Normal consistency, fineness, Initial setting and final setting time of cement. Specific gravity, soundness and Compressive strength of Cement.		

**Test on Fresh Concrete** Concrete mix design, Various workability tests – slump, compacting factor, vee-bee test.

<b>Test on Hardened Concrete</b>	Split-tensile strength test, Flexure test, NDT Tests (Rebound hammer and Ultra-sonic velocity), Poission ratio.
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