

**A CASE STUDY ON CONCRETE STRENGTH
USING RIVER WATER**

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**B. Eng (Hons) (Civil)
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By

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Report is submitted as
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DECLARATION BY THE CANDIDATE

I (Za'im bin Zaimy, 2003479514) confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.

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ACKNOWLEDGEMENT

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ABSTRACT

Destructive Test is intentional operation of equipment until it fails, to reveal design weaknesses. Nondestructive Test (NDT) is a test that does not impair the intended performance of the element or member under investigation and the commonly used NDT are Schmidt Rebound Hammer and Ultrasonic Pulse Velocity test. The main purpose of this study is to evaluate concrete strength with Non-destructive Test of the concrete that using river water with the normal concrete. The material used in this study was a normal concrete created using local material, sample water from difference River and the laboratory process have been conducted at Civil Engineering Laboratory, Universiti Teknologi Mara. The cube mould used was (150x150x150) mm³ and cured in ordinary water under room temperature. The number of samples that have been prepared was 9 cubes per strength and 3 cubes per sample. Hence the total of cube prepared was 72 cubes. The test was done using Rebound Hammer Apparatus, Ultrasonic Pulse Velocity Apparatus and Compression Machine at 7, 14,28 days and 2 months after the grid line on cube was drawn. The average value for Rebound Number, Velocity through Concrete and Compressive Strength was calculated. From the calculated result, the correlation graph between Rebound Number, Velocity through Concrete and Compressive strength was developed.