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# MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

*A Constituent Institution of Manipal University*

**III SEMESTER B.TECH. (CIVIL ENGINEERING)**

**END SEMESTER EXAMINATIONS, NOV/DEC 2016**

**SUBJECT: BUILDING SCIENCE & TECHNOLOGY [CIE 2103]**

**REVISED CREDIT SYSTEM**

**( / / 2016 )**

Time: 3 Hours

MAX. MARKS: 50

**Instructions to Candidates:**

- ❖ Answer **ALL** the questions.
- ❖ Draw a neat diagram if necessary

<b>1A.</b>	Name all constituents of cement clinker. And write formula of each and write any four points of each constituent.	<b>5</b>	<b>CO1</b>
<b>1B.</b>	Write shorts on a) self-compacting concrete b) Portland cement and its grades	<b>5</b>	<b>CO5</b>
<b>2A.</b>	What is bulking of sand? How do you find bulking of given sand? What is the significance of the same?	<b>3</b>	<b>CO2</b>
<b>2B.</b>	Write short note on (a) Polymer Concrete .(b)Aggregate crushing value (c)Normal consistency of cement	<b>3+2 +2</b>	<b>CO5</b>
<b>3A.</b>	Explain classification of bricks based on engineering property. (Strength and water absorption).Write four features of all classes.	<b>5</b>	<b>CO2</b>
<b>3B.</b>	Name different types of Ashlar masonry. Explain different types of Ashlar masonry.	<b>5</b>	<b>CO1</b>
<b>4A.</b>	Explain 4 types of glasses .write two points for each. Write 4 uses of glass.	<b>5</b>	<b>CO1</b>
<b>4B.</b>	Write short note on underpinning.	<b>5</b>	<b>CO5</b>
<b>5A.</b>	Explain with the neat sketches, i) Flat arch ii) Relieving arch	<b>5</b>	<b>CO4</b>
<b>5B.</b>	Explain all Classes of Lime.	<b>5</b>	<b>CO1</b>