

COURSE CODE (CREDITS):23B11CE411(3)

MAX. MARKS: 15

COURSE NAME: Concrete Technology

COURSE INSTRUCTORS: Prof. Ashok Kumar Gupta

MAX. TIME: 1 Hour

*Note: (a) All questions are compulsory.**(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

Q.No	Question	CO	Marks																		
Q1	What are the seven basic advantages and seven basic disadvantages of concrete?	CO-1	3																		
Q2	What are initial and final setting times of cement? Describe the test for determining standard consistency, initial and final setting times of cement. How does the knowledge of these two times help an engineer in construction work? State the IS requirements for setting times for general purpose OPC; rapid hardening and low heat OPC cements.	CO-1	3																		
Q3	Determine the fineness modulus of aggregate for the following result of sieve analysis. What does the result indicate? <table border="1"><tr><td>IS sieve size</td><td>10 mm</td><td>4.75 mm</td><td>2.36 mm</td><td>1.18 mm</td><td>600μm</td><td>300μm</td><td>150 μm</td><td>75 μm</td></tr><tr><td>Percentage passing</td><td>100</td><td>92</td><td>74</td><td>55</td><td>23</td><td>12</td><td>9</td><td>7</td></tr></table>	IS sieve size	10 mm	4.75 mm	2.36 mm	1.18 mm	600μm	300μm	150 μm	75 μm	Percentage passing	100	92	74	55	23	12	9	7	CO-1	3
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Q4	What are admixtures and mineral ad-ditives? Enlist the different admixtures used in concrete construction. Explain the function and property of any two types of admixtures.	CO-2	3																		

Q5	Describe the dry process of manufacturing of ordinary Portland cement stepwise with the help a flow chart. What are the major Bogue's compounds of cement? Discuss their role in hydration of cement.	CO-2	3
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JUT TEST-1 EXAMINATION- Feb-2025