

Abhilash Shukla.

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION- December -2018

B.Tech VII Semester

COURSE CODE: 10B13CE744

MAX. MARKS: 35

COURSE NAME: ADVANCED CONCRETE TECHNOLOGY

COURSE CREDITS: 03

MAX. TIME: 2 HRS

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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1. What is a mechanism of blast explosion? How the blast affects the concrete structures.
2. What are the different energy absorbing materials that can be used in blast resistant structures?
3. Why is it important to study the dynamic properties of concrete? Explain in detail with suitable examples.
4. In what situation would you use fly ash content of 70 percent by volume of cementitious material for making concrete? Explain in detail.
5. What is a truly elastic material? Is concrete truly elastic? If not, why? Describe the various stages of microcracking when a concrete specimen is loaded to failure.
6. What are the different properties required for a concrete to resist a blast. Please justify your answer with proper technical reasons.
7. How the strain gauges are used in concrete. What are the advantages and disadvantages of using strain gauges?