

Dr. Anandul

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- May 2019

B.Tech 8th Semester

COURSE CODE: 11B1WCE834

MAX. MARKS: 35

COURSE NAME: Highway, Construction, Maintenance and Management

COURSE CREDITS: 3

MAX. TIME: 02:00 Hr

Note: Attempt all the questions. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Explain Bitumen pavement recycling technique in detail. Also explain different recycling process. (7)
2. What are the different types of joints in rigid pavement? Explain in detail along with the specification as per Indian standards. (7)
3. Design size and spacing of dowel bars at an expansion joint of concrete pavement of thickness 25 cm. Given the radius of relative stiffness of 80 cm. design wheel load 5000 kg. Load capacity of the dowel system is 40 percent of design wheel load. Joint width is 2.0 cm and the permissible stress in shear, bending and bearing stress in dowel bars are 1000, 1400 and 100 kg/cm² respectively. (7)
4. A vertical summit curve is formed by $n_1 = +3.0\%$ and $n_2 = -5.0\%$. Design the length of the summit curve for $V=80$ kmph. (Hint: $SSD=128m$). (7)
5. Explain types of summit curves, design consideration. Also explain the procedure for measuring the length of summit curve. (7)