

Birla Institute of Technology & Science, Pilani- Pilani Campus

Second Semester 2022-2023

Comprehensive Exam

Course No: CE G570

Nature of Exam: Closed Book

Duration: 3 hours

Course Title: Highway Cons. Tech.

Max. Marks: 60 (Weightage: 35%)

Date of Exam: 11/05/2023

Note:

1. All questions are compulsory.
 2. Figures to the right indicate full marks
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| Q. 1 | Explain the different components of the batch mix plant used for production of bituminous mixes [14] |
| Q. 2 | Write the justification for: a) In a recycled concrete aggregates, the coarse RCA are more valuable and usable than fine RCA [2] b) Vibratory beam breakers are more useful for pavement breaking and removal in urban areas [2] c) Need of protection of fine RCA stockpile [2] |
| Q. 3 | Write the benefits of recycling of concrete pavement [04] |
| Q. 4 | Explain the advantages of full depth reclamation [7] |
| Q. 5 | Write the advantages of self compacting concrete [8] |
| Q. 6 | Write the difference between hot recycling and cold-in place recycling [6] |
| Q. 7 | Explain the advantages of microsurfacing [7] |
| Q. 8 | Write the justification for: a) Reduction in urban heat island effect due to provision of pervious concrete pavement [2] b) Lower strength of pervious concrete pavement as compared to conventional concrete pavement [2] c) Higher heat transfer efficiency in counter flow type drum dryer [2] d) Poor resistance of recycled bituminous mixes to intermediate and low temperature cracking (2) |