

TRANSPORTATION ENGINEERING

[illegible]

MODULE -IV: PAVEMENT MATERIALS(9)

Materials used in Highway Construction- Soils, Stone aggregates, bituminous binders, bituminous paving mixes; Portland cement and cement concrete: desirable properties, tests, requirements for different types of pavements.

MODULE -V: DESIGN OF PAVEMENTS(9)

Introduction; flexible pavements, factors affecting design and performance; stresses in flexible pavements; design of flexible pavements as per IRC; rigid pavements- components and functions; factors affecting design and performance of CC pavements; stresses in rigid pavements; design of concrete pavements as per IRC; problems.

V. TEXT BOOKS:

1. Khanna, S.K., Justo, C.E.G and Veeraragavan, A, “Highway Engineering”, Revised 10th Edition, Nem Chand & Bros, 2017.
2. Kadiyalai, L.R. “Traffic Engineering and Transport Planning”, Khanna Publishers, 2013.
3. ParthaChakraborty, “Principles of Transportation Engineering”, PHI Learning, 2017.

VI. REFERENCE BOOKS:

1. Fred L. Mannering, Scott S. Washburn, Walter P. Kilareski, “Principles of Highway Engineering and Traffic Analysis”, John Wiley, 4th Edition, 2007.
2. Srinivasa Kumar, R, “Textbook of Highway Engineering”, Universities Press, 2011.
3. Paul H. Wright and Karen K. Dixon, “Highway Engineering”, Wiley Student Edition, 7th Edition, 2009.

VII. WEB REFERENCES:

1. <http://www.nptelvideos.in/2012/11/introduction-to-transportation.html>
2. http://www.nptelvideos.com/civil_engineering/transportation_engineering_video_lectures.php
3. <https://nptel.ac.in/courses/105105107/>
4. <https://nptel.ac.in/courses/105101087/>

VIII. E-Text Books:

1. <http://e-booksdirectory.com/details.php?ebook=5616>