

# AMTS21 HIGHWAY MATERIALS, DESIGN AND CONSTRUCTION

1. Soil sub-grade, soil stabilization and low cost road
2. Desirable characteristics of Road aggregates, proportioning of aggregates
3. Types of bitumen, bitumen Constituents, characterization of bitumen, emulsions, modified bitumen
4. Desirable properties of bitumen mixes and design of bitumen mixes, tests on Bitumen, theory of filler and specification
5. Factors influencing and design of pavement grade concrete mixes
6. Bituminous and concrete road construction Procedure and specification
7. Quality assurance

## Reference Books:

1. Krebs and walker-Highway materials, McGraw Hill Book Co. 1971
2. Sharma S.K. Principles, practice and design of Highway Engg 2010
3. Kadiyali, L.R., 'Principles and Practices of Highway Engineering
4. Relevant IRC and MORT&H codes and guidelines