

Civil Engineering

Paper Code	Subject	L-T-P	Credit
1018xx	Program Elective-IV	3-0-0	3
1018xx	Program Elective-V	3-0-0	3
1018xx	Program Elective-VI	3-0-0	3
1018xx	Open Elective-II	3-0-0	3
100801	Project-2	0-0-12	6

101838	Economic Policies in India	3L:0T:0P	3 Credits
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Detailed contents

Module 1

Lecture 10 hrs.

Framework of Indian Economy: National Income - Trends and Structure of National Income, Demographic Features and Indicators of Economic Growth, Development Rural-Urban Migration and issues related to Urbanization, Poverty debate and Inequality, Nature, Policy and Implications, Unemployment-Nature, Central and State Government's policies, policy implications, Employment trends in Organized and Unorganized Sector

Module 2

Lecture 10 hrs.

Development Strategies in India: Agricultural- Pricing, Marketing and Financing of Primary Sector, Economic Reforms- Rationale of Economic Reforms, Liberalization, Privatization and Globalization of the Economy, Changing structure of India's Foreign Trade, Role of Public Sector- Redefining the role of Public Sector, Government Policy towards Public Sector, problems associated with Privatization, issues regarding Deregulation-Disinvestment and future of Economic Reforms

Module 3

Lecture 10 hrs.

The Economic Policy and Infrastructure Development: Energy and Transport, Social Infrastructure- Education, Health and Gender related issues, Social Inclusion, Issues and policies in Financing Infrastructure Development, Indian Financial System- issues of Financial Inclusion, Financial Sector Reforms-review of Monetary Policy of R.B.I. Capital Market in India.

Module 4

Lecture 10 hrs.

The Economic Policy and Industrial Sector: Industrial Sector in Pre-reforms period, Growth and Pattern of Industrialization, Industrial Sector in Post-reform period- growth and pattern of Micro, Small, Medium Enterprises, problems of India's Industrial Exports, Labor Market- issues in Labor Market Reforms and approaches to Employment Generation.

Text Books

1. Dhingra, Ishwar C. [2006], 'Indian Economy,' Sultan Chand and Sons, New Delhi.

- Datt, Ruddar and Sundaram, K.P.M. [Latest edition] , 'Indian Economy,' S. Chand and Co, New Delhi.

Reference Books

- Brahmananda, P.R. and V.A. Panchmukhi. [2001], Ed. 'Development Experience in Indian Economy, Inter-state Perspective,' Bookwell, New Delhi.
- Gupta,S.P. [1989], 'Planning and Development in India: A Critique,' Allied Publishers Private Limited, New Delhi.
- Bhagwati, Jagdish. [2004], 'In Defense of Globalization,' Oxford University Press, U.K.

101803	Contracts Management	3L:0T:0P	3 Credits
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Contracts Management. Contract Management – Introduction, Importance of Contracts, Overview of Contract Management, Overview of Activities in Contract Management; Planning and People- Resource Management; Types of Contracts, Parties to a Contract; Contract Formation, Formulation of Contract, Contract Start-Up, Managing Relationships; Common contract clauses (Notice to proceed, rights and duties of various parties, notices to be given, Contract Duration and Price. Performance parameters; Delays, penalties and liquidated damages; Force Majeure, Suspension and Termination. Changes & variations, Notices under contracts; Conventional and Alternative Dispute Resolution methods. Various Acts governing Contracts; Contract Administration and Payments- Contract Administration, Payments; Contract Management in Various Situations- Contract Management in NCB Works, Contract Management in ICB Works Contracts, Contract of Supply of Goods- Design, Supply and Installation Contracts, Contract Management in Consultancy,; Managing Risks and Change- Managing Risks, Managing Change; Contract Closure and Review- Ending a Contract, Post-Implementation Review; Legal Aspects in Contract Management- Contract Management Legal View, Dispute Resolution, Integrity in Contract Management; Managing Performance- Introduction, Monitoring and Measurement

101813	Pavement Materials	3L:0T:0P	3 Credits
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Pavement Materials. Soil - Classification, characteristics, compaction, evaluation of soil strength; stabilized pavement materials; Aggregates: requirements, properties and tests on road aggregates for flexible and rigid pavements. Bitumen: Origin, preparation, properties and tests, constitution of bituminous road binders; requirements; Criterion for selection of different binders. Bituminous Emulsions and Cutbacks: Preparation, characteristics, uses and tests, Bituminous Mixes: Mechanical properties: Resilient modulus, dynamic modulus and fatigue characteristics of bituminous mixes. bituminous mix design methods and specifications. Weathering and Durability of Bituminous Materials and Mixes. Performance based Bitumen Specifications; Superpave mix design method: design example problems. Cement Concrete for Pavement Construction: Requirements, and design of mix for CC pavement, IRC and IS specifications and tests, joint filler and sealer materials. Prerequisite:

101827	Construction Engineering Materials	3L:0T:0P	3 Credits
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Construction Engineering Materials. Design, production, application, specification, and quality control of construction materials unique to civil engineering. Stones, bricks, mortars, Plain, Reinforced & Prestressed Concrete, Construction Chemicals; Structural Steel, High Tensile Steel, Carbon Composites; Plastics in Construction; 3D printing; Recycling of Construction & Demolition wastes. Prerequisite: