Department of Water Supply & Sanitation
Recruitment of 55 Junior Engineers
Syllabus for 06.05.12 Examination

General

Section-1: Analytical Ability and General Knowledge (15 Marks)
The questions in this section will cover logical reasoning, quantitative reasoning and visual-spatial reasoning along with some questions related to general knowledge/current affairs.

Section-2: Computer Ability (10 Marks)
The questions in this section will cover basic applications of computers, proficiency in using windows, MS office etc.

Section-3: Professional (Civil Engineering) (125 Marks)

1 Building Technology and Construction Management:- Classification, properties and use of Stones, Bricks, Tiles, Lime, Cement, Concrete, Steel and Mortar, Brick and Stone Masonry, Brick bonds and type of Stone masonry walls, Lintels and Arches, roofs, Damp proofing, expansion and construction joints. Centering and shuttering, Stairs, Doors and Windows. Basic Principle of planning of building, orientation of buildings.

2 Surveying, Estimating & Costing:- Chain, Compass surveying, leveling with theodolite, Temporary and permanent adjustment, Measurement of distance and directions, Plain table survey, Curves, Estimation of quantities for various types of construction, Rate Analysis, Preparation of Tender and Contract documents.

3 Strength of Materials: - Concept of stress and strains, bending moment and shear force.

4 Reinforced Concrete Design: - Properties of Concrete, Quality Control measure, Design of beams, slabs and footings and compression members, Detailing of reinforcement.

5 Public Health Engineering: Estimation of quantities of sewerage system, laying of sewers, maintenance works and sewage disposal, primary and secondary treatment. Rural sanitation: Design Consideration for rural water supply system, hand pumps and their maintenance, construction of low cost latrines, construction of septic tanks, construction of soak-pits, traps.

6 Fluid mechanics and Irrigation: - Flow through pipes, classification and construction details of pump, Elements of hydrology, drinking water reservoirs.