

**Syllabus for the posts of Assistant Engineer (Civil)
in Haryana Police Housing Corporation Ltd.**

Civil Engineering

1. Building Materials and Construction- Stones, Timber, Bricks, Cement, Mortar, Concrete, Masonry, Steel.
2. Solid Mechanics- Stresses, Strains, Failures, Theories of Solid Material, Simple Bending and Torsion Theories, Shear Centre.
3. Graphic Static- Force Polygon, Stress diagram.
4. Structural Analysis - Analysis of trusses and frames, Introduction to plastic Analysis.
5. Design of Metal Structure - Working stress and ultimate strength design of simple structures.
6. Design of Concrete and Masonry Structures- Design of masonry walls, working stress design of plain, reinforced and prestressed concrete, ultimate strength design of reinforced and prestressed concrete.
7. Fluid Mechanics, Water Resources Engineering –Open channel and pipe flow. Hydrology Design of canals and hydraulics structures.
8. Soil Mechanics and Foundation Engineering and their general principles. Strength parameters, Earth pressures Theories, Design of Shallow and Deep foundations.
9. Transportation Engineering including Railway Engineering and Surveying, Roads Super-elevation, Ruling gradient pavements, Traffic controls, Design Considerations.
10. Environmental Engineering – Water purifications, Sewerage treatment and disposal.
11. Construction Planning and Management – Elements of construction practice. Bar charts, CPM, PERT.