

ASSAM PUBLIC SERVICE COMMISSION

SYLLABUS FOR ASSISTANT ENGINEER (CIVIL) UNDER PWD

Paper I

Syllabus For Civil Engineering Total Marks= 100

Duration! - 2 Hrs.

Sl. No.	SUBJECT	TOPICS
I.	Construction Materials	Roads & Building Materials- Timber, Stone, Brick, Sand, Mortar, Concrete, paints Bitumen etc. Detailing of Walls, floors, roofs, ceilings, staircases, doors & windows, Finishing of Building, plastering, painting, ventilation, air conditioning, lighting & acoustics etc.
II.	Theory of Structure	Bending moment & shear force diagrams for statically determine beams, Analysis of Statically determine structure, Slope and deflection, columns, fixed and continuous beams, elastic theory of arches, suspension girder bridge, analysis of frame, concept of structural stability, retaining wall, moving loads and influence lines.
III.	Design of Structure	Design of beams, columns, slabs, footing, design of compression members, design of roof truss, pre-stressed concrete, water tank, plate girder, tubular structures, concept of earthquake resistant design, use of Indian Standard Codes, design of bridges.
IV.	Transportation Engineering	Introduction : Mode of transportation. Highway Planning : geometric design of highways, testing and specifications of paving materials. design of flexible and rigid pavements. Traffic Engineering : traffic characteristics, theory of traffic flow, intersection design, traffic signs and signal design, highway capacity.
V.	Engineering Surveying	General Principles, sign convention surveying instruments and their adjustment, recording of survey observations, plotting of maps and sections, errors and their adjustment. Measurement of distances, directions and heights, correction of measure length and bearings, correction for local attractions. measurement of horizontal and vertical angles, leveling operations. refraction and curvature corrections, Chain and compass study, theodolite and tachometric traversing, traverse computation: plane table survey, solution of two and three points problems, contour surveying, setting out direction and grades & type of curves, setting out of curves and excavation lines for building foundation.
VI.	Geotechnical Engineering	Soil Mechanics : Origin of soils, soil classification, soil compaction, shear strength, soil parameters- liquid limit, plastic limit, plastic index etc. Foundation Engineering : Sub-surface investigations- drilling bore holes, sampling, penetration tests, plate load test. Foundation types : Foundation design requirements, bearing capacity of soil, stress distribution, settlement analysis in sands and clays, deep foundation, pile foundation, pile types, load capacity of piles in sands and clays, negative skin friction.
VII.	Environmental Engineering	Water pollution, air pollution, noise pollution- causes, effects and preventive measures.
VIII.	Estimation & valuation	Introduction, specifications of work, rate analysis, schedule of rates, preparation of estimates for road and building projects. Basic knowledge of value, rental method of valuation, land and buildings methods of valuation.
IX.	Construction Management	Introduction, stages of construction, bar charts and networks, role of equipment and modern construction industries.



অসম লোকসেৱা আয়োগ
ASSAM PUBLIC SERVICE COMMISSION
Jawaharnagar, Khanapara, Guwahati-781 022

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Name of Exam: Assistant Engineer (Civil) under Public Works Roads
Department

PAPER-II

(MCQ OMR Based)

Revised Syllabus for General Studies & General English

Full Marks: 100

Duration: 2-00 Hrs.

1. Current Affairs (India/Assam)
2. India History & National Movement
3. Assam History
4. Geography (India / Assam)
5. Indian Polity & Constitution
6. Sports/Books/Author and important people of Assam
7. Economy of India & Assam
8. Environment of Assam
9. General Mental Ability
10. Literature, culture & festivals of Assam & North East
11. English Grammar

KSM

17.6.20