<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>SUBJECT</th>
<th>TOPICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Construction Materials</td>
<td>Roads &amp; Building Materials- Timber, Stone, Brick, Sand, Mortar, Concrete, paints Bitumen etc. Detailing of Walls, floors, roofs, ceilings, staircases, doors &amp; windows, Finishing of Building, plastering, painting, ventilation, air conditioning, lighting &amp; acoustics etc.</td>
</tr>
<tr>
<td>II.</td>
<td>Theory of Structure</td>
<td>Bending moment &amp; 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.</td>
</tr>
<tr>
<td>III.</td>
<td>Design of Structure</td>
<td>Design of beams, columns, slabs, footing, design of compression numbers, 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.</td>
</tr>
<tr>
<td>IV.</td>
<td>Transportation Engineering</td>
<td>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.</td>
</tr>
<tr>
<td>V.</td>
<td>Engineering Surveying</td>
<td>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 barrings, 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 &amp; type of curves, setting out of curves and excavation lines for building foundation.</td>
</tr>
</tbody>
</table>
### Environmental Engineering
- Water pollution, air pollution, noise pollution- causes, effects and preventive measures.

### 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.

### Construction Management
- Introduction, stages of construction, bar charts and networks, role of equipment and modern construction industries.

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**Paper- II**

**SYLLABUS FOR GENERAL STUDIES**  
**Total Marks=60**

<table>
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| **I.**  | General Studies | 1. Current Affairs (India/Assam)  
2. Indian 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. |
| **II.** | General English (HSLC equivalent) | 1. Correction of Common error.  
2. Precis Writing.  
3. Usage of tenses. |
| **III.** | Basic Knowledge of regional language of the State (HSLC equivalent) | 1. Literature, culture & festivals of Assam & North East. |

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Principal Controller of Examinations.  
Assam Public Service Commission,  
Jawaharnagar, Khanapara, Guwahati - 22.