

SYLLABUS (PART B) – TRANSPORTATION

Proficiency, experience and good working knowledge of transportation engineering practice in Malaysia covering the syllabus below.

1. Transportation systems

- Transportation planning & management
- Transportation system modal components
 - Air Transportation
 - Water Transportation
 - Railway Transportation
 - Road & Highway Transportation
- Public transportation systems
- Intelligent transportation systems
- Transportation, the Environment and Sustainable Development Goals

2. Road and highway design - Design to JKR Arahan Teknik and other relevant authorities

- Horizontal and vertical curves for road alignment;
- Acceleration, deceleration lanes
- junction design;
- Super elevation design;
- Road pavement design
 - Flexible pavement
 - Rigid pavement

3. Traffic Engineering

- Traffic flow studies;
- traffic data analysis;
- traffic management;
- highway and intersection capacity;
- traffic signal control.
- Parking systems, planning and design
- The role of TIA, TMP and RSA in the construction industry
- Regulatory practice and submission procedure for traffic engineers

4. **Safety**

- Road Safety Audit (RSA) - Stage 1
 - Road network effects
 - General geometric standards
 - Outline of provision for users with special needs
 - Access control details
 - Environmental control details
 - Alternative alignment study

- Road Safety Audit - Stage 2
 - Design criteria
 - Cross section, horizontal & vertical alignment
 - Interchanges and intersections
 - Access control/provisions
 - Major land use developments
 - Stage development of major projects

5. **Traffic Impact Assessment (TIA)**

- Objectives of TIA
- Analysis of site & surroundings
- Analysis of existing traffic
- Forecast and analysis of future traffic without development
- Forecast and analysis of future traffic with development
- Trip generation
- Recommendation for mitigation and improvements

6. **Traffic Management Plan (TMP)**

- Traffic Management & TMP
- Principles, strategies and planning for traffic management at work zones

- Design of work zones and layouts of TMP
- Traffic control devices
- Inspection of traffic control zones