



Tram Driver

Mentor's Q&A

(Generic Version)

Version 1

June, 2011

IMPORTANT NOTICE

This booklet is one of a series of generic training and assessment templates developed as guides for heritage tramway operators seeking to develop or upgrade their local training and assessment resources. This booklet and others in the series are not intended to be training resources in their own right but rather to be suitably customised, embellished and adapted by tramway operators to match the specific context of their own tramway, e.g. types of trams and associated equipment, the track layout and infrastructure, the local standard procedures and rules, safety management and safeworking systems, the tramway's organisational structure, and the roles and functions of personnel in the tramway.

Tramway operators seeking to use this booklet and others in the series should initially refer to the ***ATHRA Customisation Guidelines Booklet*** which provides important information on how the generic templates should be used.

Disclaimer

The information contained herein is made available by the Association of Tourist & Heritage Rail Australia Inc (ATHRA) as part of a set of ***generic training and assessment templates*** for use by individual heritage tramway operators.

It is intended that heritage tramway operators will be able to create their own local training resources by suitably modifying, embellishing and customising the generic templates to meet their own requirements.

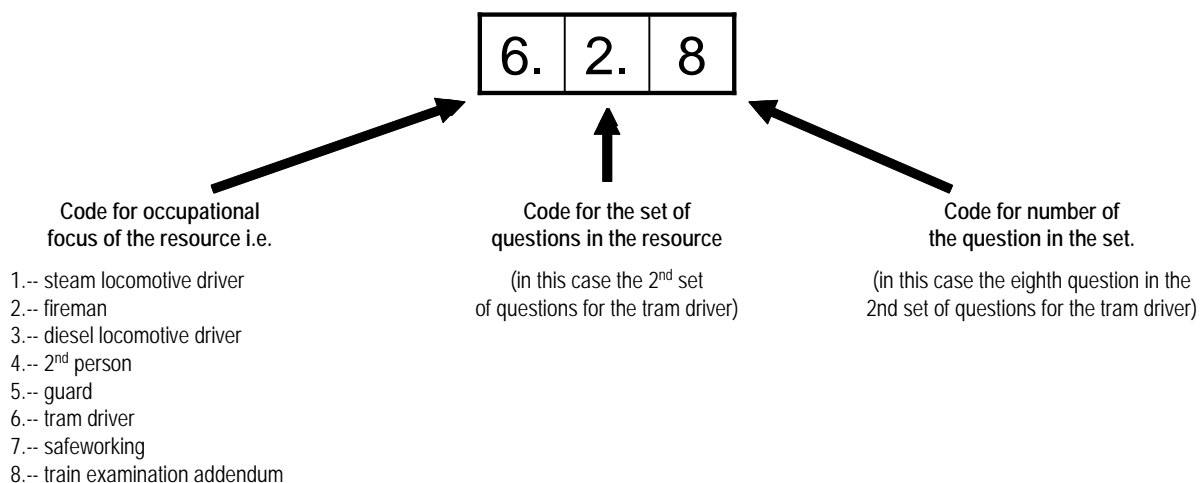
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NOTES

CODING SCHEME FOR THE ATHRA RESOURCES

The coding scheme for the ATHRA Resources is as follows:



CUSTOMISATION OF QUESTIONS AND ANSWERS IN THE 'MENTOR'S Q&A'

As explained in the ATHRA Customisation Guidelines, this *Knowledge Checklist* and related *Mentors Q&A* are generic documents designed to be customized and adapted, if necessary, by local heritage tramways to match their own tramway configuration, equipment, procedures, safety management systems, etc. Questions in the booklet and related sample responses in the *Mentor's Q&A* may be modified by updating the content of the existing templates to incorporate appropriate information about the tramway's own operating system, equipment, road, procedures, safety management system, etc. This may involve appropriate alteration to existing questions or the insertion of additional suitable questions.

To aid in the addition of questions, if needed, a blank row has been provided at the end of each set of questions in the generic checklist and Q&A. The following is a step-by-step process to incorporate any additional questions:

1. Using the mouse, select the blank row
2. In the 'TABLE' drop down menu at the top of the document select 'Insert'
3. Click on 'Insert rows below'
4. Repeat as many times as necessary until you have sufficient rows for the additional questions (including the original blank row in the generic document)
5. Insert the text for each of the additional questions
6. Insert the codes of the additional questions as per the coding scheme for the ATHRA training and assessment resources
7. Make sure there are matching questions and sample responses with the same code in both the *Knowledge Checklist* and the *Mentor's Q&A Booklet*

Question Set 6.1 Role and responsibilities of a tram driver

| QUESTION | SAMPLE RESPONSE |
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| <p>Q6.1.1 What are the key tasks performed by a tram driver?</p> | <ul style="list-style-type: none"> • Working as part of a tram crew, where applicable (e.g. with conductor or second person) • Operating a tram in a depot and in traffic • Keeping vigilant while operating and moving a tram • Following standard operating procedures and any applicable safeworking and road rules • Signing on and checking roster, notice boards, operational instructions, timetables, tram availability and other information needed to operate a tram • Collecting keys and equipment and signing out tram • Turning on all appropriate switches (e.g. compressor, power, lighting) • Conducting pre-start checks and checking the operation of sanders, sand boxes, brakes and control equipment • Recording, rectifying, isolating and/or tagging any defects and deficiencies as applicable and/or reporting to relevant personnel for appropriate action • Starting a tram • Obtaining authority to move and position a tram prior to service and following depot instructions, standard operating procedures and safeworking rules • Moving the tram to and securing it in its required position prior to service • Operating a tram in traffic • Following tram route and timetable • Approaching and stopping at scheduled or compulsory stops • Operating tram doors where required • Operating ticketing system (where applicable) • Complying with speed limits and signals • Observing traffic and hand signals • Operating points during a tram journey • Turning a tram at a terminal • Stopping the tram using the service brake, emergency brake or the handbrake • Dealing with abnormal situations during tram operations • Carrying out required post-operational checks and stabling and securing the tram • Completing paperwork |

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| <p>Q6.1.2</p> <p>Describe the key safeworking rules that apply to you as a tram driver?</p> | <ul style="list-style-type: none"> • Candidate's response should paraphrase the tramway operator's safeworking rules as they apply to tram driver on the railway concerned. |
| <p>Q6.1.3</p> <p>What are the potential consequences of not following safeworking rules and other regulations applicable to the tram driver's role on your tramway?</p> | <ul style="list-style-type: none"> • A serious accident possibly involving fatalities • Possible injury to self, colleagues, the public and other road vehicles. • Possible damage to own tram, other trams or tramway facilities. |
| <p>Q6.1.4</p> <p>What are the tram driver's initial duties after signing on?</p> | <ul style="list-style-type: none"> • Checking roster, notice boards, operational instructions, tram availability and other information needed to operate a tram • Collecting keys and equipment and signing out tram • Turning on all appropriate switches (e.g. compressor, power, lighting) • Conducting pre-start checks • Checking the operation of the control equipment • Checking the brakes • Checking the sanders and sand boxes • Recording, rectifying, isolating and/or tagging any defects and deficiencies as applicable and/or reporting to relevant personnel • Starting the tram |
| <p>Q6.1.5</p> <p>What action must you take if you find a defect during a shift as a tram driver?</p> | <ul style="list-style-type: none"> • Candidate should outline the tramway operator's standard procedures for the action, recording and reporting that needs to be undertaken in the event of an identified defect.. |
| <p>Q6.1.6</p> <p>What action must you take if you are involved in a safety incident during a shift as a tram driver?</p> | <ul style="list-style-type: none"> • Candidate should outline the tramway operator's standard procedures for the action, recording and reporting that needs to be undertaken in the event of a safety incident. |
| <p>Q6.1.7</p> <p>Where can you obtain a copy of the duties of a tram driver, the safeworking rules applicable to drivers and other key reference documents a tram driver needs?</p> | <ul style="list-style-type: none"> • Candidates should indicate the ways in which the tramway operator concerned makes available to tram drivers the safeworking rules and other key reference documents they need to understand and fulfil their roles and responsibilities. |

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| <p>Q6.1.8</p> <p>Give five reasons why route knowledge is so important to a tram driver</p> | <ul style="list-style-type: none"> • Adjusting tram operations to allow for rising and falling grades in specific sections of the tram route • Following safeworking and standard procedures when approaching and traffic signals • Adjusting tram operations to comply with speed restrictions and when approaching stops • Remaining vigilant when approaching areas of traffic congestion • Remaining vigilant when approaching sections of the tram route where there are specific hazards (e.g. stop signs, converging traffic, curves, bridges, etc.) |
| <p>Q6.1.9</p> <p>What are the tram driver's duties when stabling a tram?</p> | <ul style="list-style-type: none"> • Candidate should outline the tramway operator's requirements and standard procedures for a tram driver to ensure that a tram is correctly located in its required post-operational condition and is properly secured |
| <p>Q6.1.10</p> <p>Give three examples of hazards that exist when working as a tram driver.</p> | <p>Dependent on the context of the tramway concerned, examples of possible responses may include:</p> <ul style="list-style-type: none"> • Driving in road and pedestrian traffic • Falling from heights • Working in confined spaces (driver's cab) • Working under wires • Chemicals • Moving work platform • Dehydration and fatigue • Noise • Electrocution – 600V DC • Isolated (Electrical) Tramcar • Fire |
| <p>Q6.1.11</p> <p>What personal protective equipment (PPE) must be used by tram drivers when carrying out their duties and functions?</p> | <ul style="list-style-type: none"> • Candidate will describe the personal protective equipment (PPE) that must be used by tram drivers when carrying out their duties and functions as per the safety management plan and standard operating procedures of the tramway operator concerned. |
| <p>Q6.1.12</p> <p>Give two examples of risk management strategies to control hazards when working as a tram driver.</p> | <p>Dependent on the context of the tramway concerned, examples of possible responses may include:</p> <ul style="list-style-type: none"> • Ensuring public safety (e.g. checking all passengers have alighted or boarded before closing doors and moving off, etc.) • Using personal protective equipment (PPE) • Using fire extinguishers and water hoses to control fire emergencies • Following the tramway's established risk management procedures |
| <p>Q6.1.13</p> <p><i>Blank for additional question</i></p> | <ul style="list-style-type: none"> • |

Question Set 6.2 Preparing and starting a tram

| QUESTION | SAMPLE RESPONSE |
|---|--|
| <p>Q6.2.1</p> <p>What are the initial duties of a tram driver at the commencement of a shift?</p> | <ul style="list-style-type: none"> • Candidate should outline the specific rail operator's requirements and standard procedures for the initial duties of a tram driver after signing on. This will probably include: <ul style="list-style-type: none"> – sign on, – check the duty roster – read and interpret the notice boards, operation instructions, tram availability and other information needed to determine the required tram driving duties for the shift. |
| <p>Q6.2.2</p> <p>What are the principal components of the tram(s) on which you will be working? What is the purpose of each?</p> | <ul style="list-style-type: none"> • Candidate will describe the principal components of the tram(s) concerned and their purpose as described in the relevant manual(s) provided by the tramway operator. Dependent on the type of tram, this may include: <ul style="list-style-type: none"> – air brakes and related valve – air system including the air compressor and pressure gauge – axles and gears – bells, gongs, air horns, and buzzers – switchboard – circuit or line breakers – control circuit – controller – destination lights and destination signs – door controls – electric brake – end lighting – fuses – handbrake – headlights – lifeguard – lighting system – main power circuit – motor bearings – motors – reversing lever/handle – rheostat/resistor grids – sanding apparatus – trolley pole/pantograph – wheels – windshield wiper |

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| <p>Q6.2.3</p> <p>Describe the pre-operational checks you must conduct for the tram(s) on which you will be working.</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in carrying out the pre-start checks required under the standard operating procedures of the tramway operator for the type of tram concerned. Dependent on the type of tram, these will typically include: <ul style="list-style-type: none"> – checking and reporting any evidence of damage to the tram – checking the pole settings – checking of air pressure of air brake system (where applicable) – testing of all lights, including headlights, – inspecting spare lamps and fuses – checking the points bar – testing that the gong, bell, buzzers, air horn and other warning devices are functioning correctly – checking of run number plates and auxiliary notice boards – checking of the destination and route number signs (these may needed to be adjusted for the planned journey of the tram). – checking the operational readiness of the.... <ul style="list-style-type: none"> • tool kit • fire extinguisher • first aid kit • communication equipment |
| <p>Q6.2.4</p> <p>Describe how you would check that the tram's control equipment is functioning correctly.</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in carrying checks of the control equipment as per the standard operating procedures of the tramway operator for the type of tram concerned. |
| <p>Q6.2.5</p> <p>Describe how you would check that the tram's braking system is functioning correctly.</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in carrying checks of the braking system including the sanding system as per the standard operating procedures of the tramway operator for the type of tram concerned. |
| <p>Q6.2.6</p> <p>What action should a driver take if defects or deficiencies are identified during checks or during operations?</p> | <ul style="list-style-type: none"> • The standard operating procedures for taking action on identified defects and deficiencies may vary from one tramway operator to another. The candidate will describe the standard operating procedures for the tramway operator concerned. • At the least, the defects and deficiencies must be recorded and reported. • Depending on the tramway operator's policies and procedures, the driver may <u>also</u> be required to <ul style="list-style-type: none"> – rectify the defects and deficiencies, if possible, – Isolate them, and/or – tag them. |

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| <p>Q6.2.7 What steps are involved in starting the tram?</p> | <ul style="list-style-type: none"> • Candidate will describe the steps are involved in starting the tram as per the standard operating procedures of the tramway operator for the type of tram concerned. Dependent on the type of tram, these will typically include: <ul style="list-style-type: none"> – making eye contact with the conductor (where applicable), – ringing the tram's bell, gong or other audible indicator, – checking that the way ahead is clear, – confirming that there is adequate air pressure in the braking system, – releasing the brake, – Smoothly activating the tram controls up to the first notch (to confirm the operation of the tram), – Notching off and stopping the tram, and – Reapplying the brake (while the tram is awaiting movement to its pre-service position). |
| <p>Q6.2.8 <i>Blank for additional question</i></p> | <ul style="list-style-type: none"> • |

Question Set 6.3 Moving a tram

| QUESTION | SAMPLE RESPONSE |
|---|--|
| <p>Q6.3.1 Describe the process involved in obtaining authority to move and position a tram?</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in obtaining authority to move and position a tram as per the standard operating procedures of the tramway operator. |
| <p>Q6.3.2 How should a tram's controls be operated?</p> | <ul style="list-style-type: none"> • Smoothly and carefully. • It is important to develop a 'feel' for the controls and achieve steady and even acceleration with smooth transitions from one notch to the next. This ensures an enjoyable journey for passengers and prevents possible damage to the tram's control equipment. • It is also important to smoothly <u>slow</u> a tram by notching off prior to stopping and correctly applying the service brake to ensure a gradual deceleration and a 'jerk-free' stop at the correct location. |

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| <p>Q6.3.3</p> <p>Why is it important to remain vigilant when moving a tram in a depot?</p> | <ul style="list-style-type: none"> • To identify any situation that may potentially be unsafe or cause a problem in the safe and efficient running of the tram, including: <ul style="list-style-type: none"> – problems on the way ahead of the tram in the yard (e.g. watching the tram ahead, looking for faults in the overhead, or being alert for pedestrians or motor vehicles in the vicinity of the track ahead), – problems on the tram itself, or – problems in the yard environment around the tram. • It is the driver's special duty to regularly scan the tram's operating environment in the yard to check that there are no problems either occurring then, or which may be developing. |
| <p>Q6.3.4</p> <p>Describe the process involved in moving a tram to its required position in the depot?</p> | <ul style="list-style-type: none"> • Candidate will describe the sequence of processes involved in moving a tram to its required position in the depot as per the standard operating procedures of the tramway operator for the type of tram concerned. • This includes the operation of the tram, stopping it in the right position and securing it when in position. |
| <p>Q6.3.5</p> <p><i>Blank for additional question</i></p> | <ul style="list-style-type: none"> • |

Question Set 6.4 Conducting tram operations

| QUESTION | SAMPLE RESPONSE |
|---|--|
| <p>Q6.4.1</p> <p>Why is it important to work collaboratively with other members of a tram crew and how is this achieved?</p> | <ul style="list-style-type: none"> • A tram crew needs to work together as a team to ensure a safe, comfortable and efficient journey for the tram passengers • Central to this teamwork is: <ul style="list-style-type: none"> – a clear understanding of each other's roles, and – effective communication, including verbal communication and non-verbal communication through eye-to eye contact and through the use of the tram's signalling devices such as bells, gongs, buzzers, etc. |

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| <p>Q6.4.2</p> <p>What is involved in operating a tram in traffic?</p> | <ul style="list-style-type: none"> • Taking care to observe the traffic situation and to make appropriate adjustments to the tram's speed, • Being prepared to take emergency action if a safety incident or hazard is perceived, • Following the road rules at all times, • Giving clear signals to other road users, • Operating the tram controls smoothly and steadily so as to provide an enjoyable travel experience for the passengers, • Having a good knowledge and understanding of the tram's operating route and in particular the traffic hazards that may be experienced along the route, and • Having an awareness of the location of stops and the capability of approaching the stops with gentle deceleration and braking to enable correct positioning of the tram at each stop. |
| <p>Q6.4.3</p> <p>Describe the route of your tram, highlighting the stops, timetable and key features such as traffic signals, speed limits, points and safety hazards?</p> | <ul style="list-style-type: none"> • Candidate will describe the tram route including the designated stops and operating timetable. • The key features such as traffic signals, speed limits, points and safety hazards will be highlighted for the route concerned. |
| <p>Q6.4.4</p> <p>Describe the precautions and procedures you should follow when approaching and stopping at scheduled stops along a tram route?</p> | <ul style="list-style-type: none"> • Anticipating a scheduled stop and commencing deceleration in sufficient time for a gradual stop, • Approaching the stop smoothly and steadily with appropriate deceleration and braking that allows the tram to come to a gentle stop on the required stopping position, and • The stop should be achieved without sudden deceleration or jerks arising from sudden braking. |
| <p>Q6.4.5</p> <p>What is involved in operating the tram doors (where fitted)</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in operating a tram's doors as per the standard operating procedures of the tramway operator for the type of tram concerned. |
| <p>Q6.4.6</p> <p>What is involved in operating the tram ticketing system (where applicable)</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in operating a tram's ticketing system (where applicable) as per the standard operating procedures of the tramway operator for the type of tram concerned. |

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| <p>Q6.4.7 Why is it important to remain vigilant when operating a tram.</p> | <ul style="list-style-type: none"> • To identify any situation that may potentially be unsafe or cause a problem in the safe and efficient running of the tram, including: <ul style="list-style-type: none"> – problems on the way ahead (e.g. watching the tram ahead, looking for faults in the overhead such as broken span wires, insulators, or being alert for pedestrians or motor vehicles in the vicinity of the track ahead), – problems on the tram itself, or – problems in the traffic situation around the tram. • It is the driver's special duty to regularly scan the tram's operating environment to check that there are no problems either occurring then, or which may be developing. • The driver must recognise any situation that may potentially be unsafe or cause a problem in the safe and efficient running of the tram, and take appropriate action to control the situation. |
| <p>Q6.4.8 What should a driver do concerning speed limits along the tram's route?</p> | <ul style="list-style-type: none"> • Trams must comply with the prescribed speed limits both within the depot and when en route on a journey. • It is important that the tram driver is aware of all of the prescribed speed limits along a tram route and in the depot and regulates the tram's speed to comply with the limits. |
| <p>Q6.4.9 What should a driver do concerning traffic signals along the tram's route?</p> | <ul style="list-style-type: none"> • Tram drivers must observe and comply with all fixed traffic signals and hand signals made by authorised persons directing traffic. • Drivers must also remain vigilant to recognise signals made by vehicles in traffic indicating a left or right and turn and/or stop and must respond as per the applicable road rules. |
| <p>Q6.4.10 What are the procedures for operating points during a tram journey (where applicable)?</p> | <ul style="list-style-type: none"> • Where applicable, candidate will describe the processes involved in operating points during a tram journey as per the standard operating procedures of the tramway operator for the tram route and type of tram concerned. |
| <p>Q6.4.11 What are the procedures for turning a tram at a terminus?</p> | <ul style="list-style-type: none"> • Where applicable, candidate will describe the processes involved in turning a tram at a terminus as per the standard operating procedures of the tramway operator for the tram route(s) and type of tram concerned. |
| <p>Q6.4.12. Describe how you would stop a tram using the service brake, emergency brake or the handbrake.</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in stopping a tram using (1) the service brake, (2) the emergency brake and (3) the handbrake as per the standard operating procedures of the tramway operator for the type of tram concerned. |

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| <p>Q6.4.13 Give five examples of abnormal situations that could arise during a tram journey and the action you would take if they occurred?</p> | <ul style="list-style-type: none"> • Candidate will describe the action to be taken in the event of five different types of abnormal situation as per the rail operator's emergency and standard operating procedures. • Examples of the types of abnormal situations that could be included are: <ul style="list-style-type: none"> – pedestrians or vehicles crossing the rails in front of the moving tram, – equipment failure, – trolley pole damaged or unusable, – overhead power failure, – signals failure, – incorrect information or failure in communications, – a passenger emergency (e.g. illness or injury), – an ill or injured crew member, – a passenger initiated alarm, – a false alarm, – a derailment, – a collision, – a chemical spill, – a fire, and – a bomb threat |
| <p>Q6.4.14 <i>Blank for additional question</i></p> | <ul style="list-style-type: none"> • |

Question Set 6.5 Shutting down and stabling a tram

| QUESTION | SAMPLE RESPONSE |
|---|---|
| <p>Q6.5.1 Describe the procedures for moving a tram to its stabling position in the depot?</p> | <ul style="list-style-type: none"> • Candidate will describe the processes involved in moving a tram to its stabling position in the depot as per the standard operating procedures of the tramway operator for the tram route and type of tram concerned. |
| <p>Q6.5.2 Describe the post-operational checks you must conduct for the tram(s) after service.</p> | <ul style="list-style-type: none"> • Candidate will describe the all of the required post-operational checks that need to be undertaken as per the tramway operator's checklist and standard procedures for the type of tram concerned. |

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| <p>Q6.5.3</p> <p>What action should be taken if faults or defects are identified during post-operational checks of the tram and its equipment?</p> | <ul style="list-style-type: none"> • The standard operating procedures for taking action on identified defects and deficiencies may vary from one tramway operator to another. The candidate will describe the standard operating procedures for the tramway operator concerned. • At the least, the defects and deficiencies must be recorded and reported. • Depending on the tramway operator's policies and procedures, the driver may <u>also</u> be required to <ul style="list-style-type: none"> – rectify the defects and deficiencies, if possible, – Isolate them, and/or – tag them. |
| <p>Q6.5.4</p> <p>How is the tram secured in its stabling position?</p> | <ul style="list-style-type: none"> • The candidate describes the tramway's procedures for securing a tram in its stabling position. • For example this may include: applying the handbrake and turning off all switches. |
| <p>Q6.5.5</p> <p>What other tasks might a tram driver undertake after securing the tram?</p> | <ul style="list-style-type: none"> • Check that the tram driver's equipment kit (e.g. tools, fire extinguisher, first aid kit and other tram equipment) is complete and is in good operational condition, • If there are any defective or broken components or if some parts of the kit or its equipment are missing, take appropriate action to report and rectify the problem, and • Make sure that the equipment kit is properly stowed and/or returned to store and is ready for use when the tram is next prepared for service |
| <p>Q6.5.6</p> <p>What paperwork must be completed after the tram is stabled and secured?</p> | <ul style="list-style-type: none"> • Candidate will describe the all of the paperwork that must be completed as per the tramway operator's checklist and standard operating procedures. This may typically include: <ul style="list-style-type: none"> – time sheet – log or record of tram operations – reports of operational problems with the tram and/or any defective equipment identified and details of any action taken or required – reports of any safety incidents as per standard procedures and regulatory requirements – paper work related to the return of the keys and equipment to store. |
| <p>Q6.5.7</p> <p><i>Blank for additional question</i></p> | <ul style="list-style-type: none"> • |