QUIZ-MTM Standards Induction for the *CS&C Roles*

Version 1.1, 2018

Applicant Name: _____

RSW number _____

It is a requirement of the MTM Signals, CS&C, and Project Competency Management system for all RSW to be familiar with, and understand where to locate technical standards, signalling standard documents and plans, technical information, competencies and MTM latest updates.

A acceptance or pass mark of **80% or greater** is required for this "Question and Answer" Quiz (require minimum of **16 or more correct** answers)

These questions are not to be regarded as proof of competency with MTM. (This is reviewed and assessed as a separate exercise with the RSW).

For your information.

MTM standards, and other MTM technical information is found at the website, https://documentportal.metrotrains.com.au/Pages/default.aspx

Note. In response to PTV's Industry Announcement regarding the VRIOGS Retirement from 30th June 2018, MTM has rebadged selected VRIOGS to ensure a smooth, transparent transition from the retirement of VRIOGS to a full suite of MTM Engineering Standards/Specifications applicable to Melbourne Metropolitan Rail Network. The technical contents of the rebadged VRIOGS are still relevant to Melbourne Metropolitan Rail Network.

Always check the latest L1-CHE-GDL-005 Engineering Standards Listing for Engineering Standards applicable to MTM network. It is available on Chief Engineer's Policies and Procedures page on the Depot or the MTM's Document Portal. If you find an MTM document referencing a VRIOGS, please refer to the latest L1-CHE-GDL-005 Engineering Standards Listing for a translation, which is available on Chief Engineer's Policies and Procedures page on the Depot or the MTM's Document Portal.

Standard drawings, VRIOG standards and other plans are found at the link (registration with DMS is required to access this website), https://dms.ptv.vic.gov.au/Dms/Account/LogIn?ReturnUrl=%2fDms%2f

The Metro Trains Melbourne Academy, competency and RSW site containing all competency information and MTM competency documents such as Statement of competency forms,Checklists, competency matrix, Competency Manuals, Signal Standards induction (Quiz) and update bulletins are found at the website, http://www.metrotrains.com.au/rail-safety-worker-competence

Questions

Question – 1

In the MTM L1-CHE-SPE-297 standard, name the clause and specified Category in relation to Environmental Factors and temperature.

1. Clause 4.2 – Category B4
2. Clause 5.1
3. Clause 5.5
4. Clause 4.4 – Category B4

Question – 2

In the MTM L1-CHE-MAN-003 Signals Rail Safety Worker Competence name the clause that relates to Subject Matter Experts (SME) and the document that Metro issue to all SME's.

1. Clause 12.4 – Metro letter of authorisation
2. Clause 7.4 – Metro Statement of Competency
3. Clause 14.1 – Metro Work Experience Record
4. Clause 6.7.1 – Metro Checklist

Question – 3

In the MTM document L1-NPD-PRO-002 Works Readiness Procedure what is the correct business rule that relates to the issued for construction (IFC) design for all signalling works, and the "T" number of weeks that IFC design must be approved before the deadline?

1. Business rule #1 and 5 weeks
2. Business rule #2 and 3 weeks
3. Business rule #3 and 4 weeks
4. Business rule #4 and 8 weeks

Question – 4

In the MTM document L1-CHE-PLA-004 MSPM 030600-01 Signal Cable Management Strategy, what section can the cable insulation values be found and also the values for existing cable core to core to earth insulation?

1. Section 8.3 (c)
2. Section8.4 (2a)
3. Section 10 table 1
4. Section 10 table 2

Question – 5

In what MTM document can the requirements for Removal of redundant signalling wiring and equipment be found?

1. MTM L1-CHE-SPE-069
2. MTM L1-CHE-SPE-073
3. MTM L1-CHE-SPE-043
4. MTM L1-CHE-STD-070

Question – 6

In which MTM document can the list of the MTM Chief Engineers Standards be found?

1. L1-CHE-GDL-005
2. L1-CHE-GDL-009
3. MTM L1-CHE-SPE-069
4. L1-NPD-PRO-002

Question – 7

In which two MTM documents can the signalling principles and configuration requirements, and the signal sighting standards be found?

1. L1-CHE-STD-036 and L1-CHE-STD-073
2. L1-CHE-STD-036 and L1-CHE-STD-004
3. L1-CHE-STD-072 and L1-CHE-STD-064
4. L1-CHE-STD-004 and L1-CHE-STD-070

Question – 8

In which MTM standard can the Requirements for MTM construction of cable route and signalling civil works be located?

1. L1-CHE-STD-043
2. L1-CHE-STD-036
3. L1-CHE-GDL-017
4. L1-NPD-PRO-002

Question – 9

In the MTM document L1-CHE-STD-016 MEST 000002-05 Track Bonding for Signalling and Traction Return Current, which section refers to signalling bonding?

1. Section 8.1
2. Section 9.2
3. Section 16
4. Section 18

Question – 10

In the MTM document L1-CHE-SPE-154 3.3 Kv Essential Services Distribution System, where can the signal power supply section be located?

1. Section 7.6
2. Section 10.2
3. Section 11.1
4. Section 13

Control Systems & Communications

Question – 11

In MTM technical note L1-CHE-INS-094 Requirement for Signals Passed at Danger (SPAD) alarms which section relates to design requirements and where SPAD alarms shall be captured by the signalling and train control system designer?

1. Section 6.2 b)
2. Section 6.3.1 a)
3. Section 6.3.2 b)
4. Section 6.2 e)

Question – 12

In L1-CHE-STD-072 Signal box work station specification what section refers to the layout of the signalling control screen and requirements for indications?

1. Section 4.4 a)
2. Section 4.10 b)
3. Section 4.7 g)
4. Section 5 a)

Question – 13

In which MTM documents can the numbering of controlled signals in the Metro network be found ?

1. L1-CHE-STD-069 and L1-CHE-STD-043
2. L1-SPE-246 and L1-CHE-STD-064
3. L1-CHE-STD-064 and L1-CHE-STD-069
4. L1-CHE-STD-071 and L1-CHE-STD-073

Question – 14

In L1-CHE-STD-072 - Signal Box Workstation Specification what is the minimum time allowed for the UPS system to allow continued operation of the workstation without standby backup?

1. 2 Hours and in accordance to ARO standards
2. 10 Hours and in accordance to L1-CHE-STD-073
3. 4 Hours and in accordance to PTV requirements
4. 12 Hours

Question – 15

In L1-CHE-STD-072 - Signal Box Workstation Specification how long shall the workstation retain a log of all events; indications, commands and diagnostic conditions for after the occurrence of the event in normal operation and when can it be over written?

1. 2 Weeks and in 4 weeks it can be over written
2. 1 Week and in 2 weeks it can be over written
3. 4 weeks and in 4 weeks it can be over written
4. 12 Hours and it can be over written after 24 hours

Question – 16

Within L1-CHE-SPE-281 Standard requirements for signalling electronic systems what sections refers to reliability, life and provision for safeworking procedures?

1. Section 9 and 3.16
2. Section 13.1 and 16
3. Section 11 and 14.3
4. Section 4.8 and 4.14

Question – 17

In L1-CHE-MAN-003-Signal Rail Safety Worker Competence manual what section refers to Control Systems and communications, and what is the typical years of experience for a CS&C technician?

1. Section 6.8 and 5 years' experience
2. Section 6.9 and 3 years work experience
3. Section 6.8 and 3 years minimum work experience
4. Section 6.7 and 10 years work experience

Question – 18

In what MTM documents can the technical requirements for signal box work station specifications be found and the requirements for signalling electronic systems?

1. L1-CHE-STD-072 and L1-CHE-SPE-278
2. L1-CHE-STD-072 and L1-CHE-STD-069
3. L1-CHE-STD-071 and L1-CHE-SPE-303
4. L1-CHE-SPE-296 and L1-CHE-SPE 282

Question – 19

Within the MTM L1-SIG-STD-001 MSST-060000-01 standard for communications links for signalling what sections refer to performance requirements, redundancy and diversity requirements?

1. Section 9 and section 11
2. Section 12 and 15
3. Section 9 and 10
4. Section 13 and 8

Question – 20

L1-CHE-STD-006-MTM Requirements for new assets

Within this standard what clause refers to communications equipment, and how many spare visual display screens (VDU) and monitors shall be provided by projects or others?

1. Clause 9, and 3 VDU's supplied
2. Clause 15, and 10% of the installed screens shall be supplied
3. Clause 12, and 20% spares shall be supplied
4. Clause 15, and six spare VDU's per project shall be supplied

Score _____ / 20

Note-requires 80% correct answers to pass (16 or more correct answers)

Assessment Result

Circle the assessment outcome

Passed

Not Passed

Comments

MTM Approved Signals Assessor to complete as assessor of the Standards Induction

RSW number _____

Signature: _____

Name: _____

Date: _____

RSW Applicant to complete as acceptance of Standards induction assessment

Signature: _____

Name: _____

Date: _____