

# Trainer Value Pack

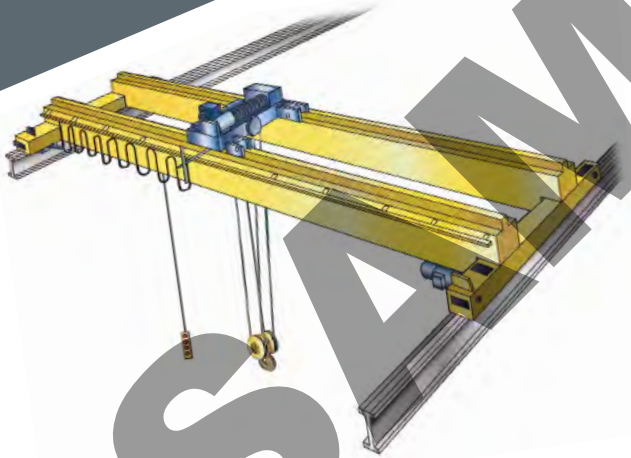


# LEARNER GUIDE



## Overhead Crane (Remote operated)

RII COMPETENCY



Training support material for:

RIIHAN305D –  
Operate a gantry or overhead crane  
(Remote operated)

Produced by:



Includes question/answer and practical training records

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# Plan and prepare for gantry/overhead crane operation

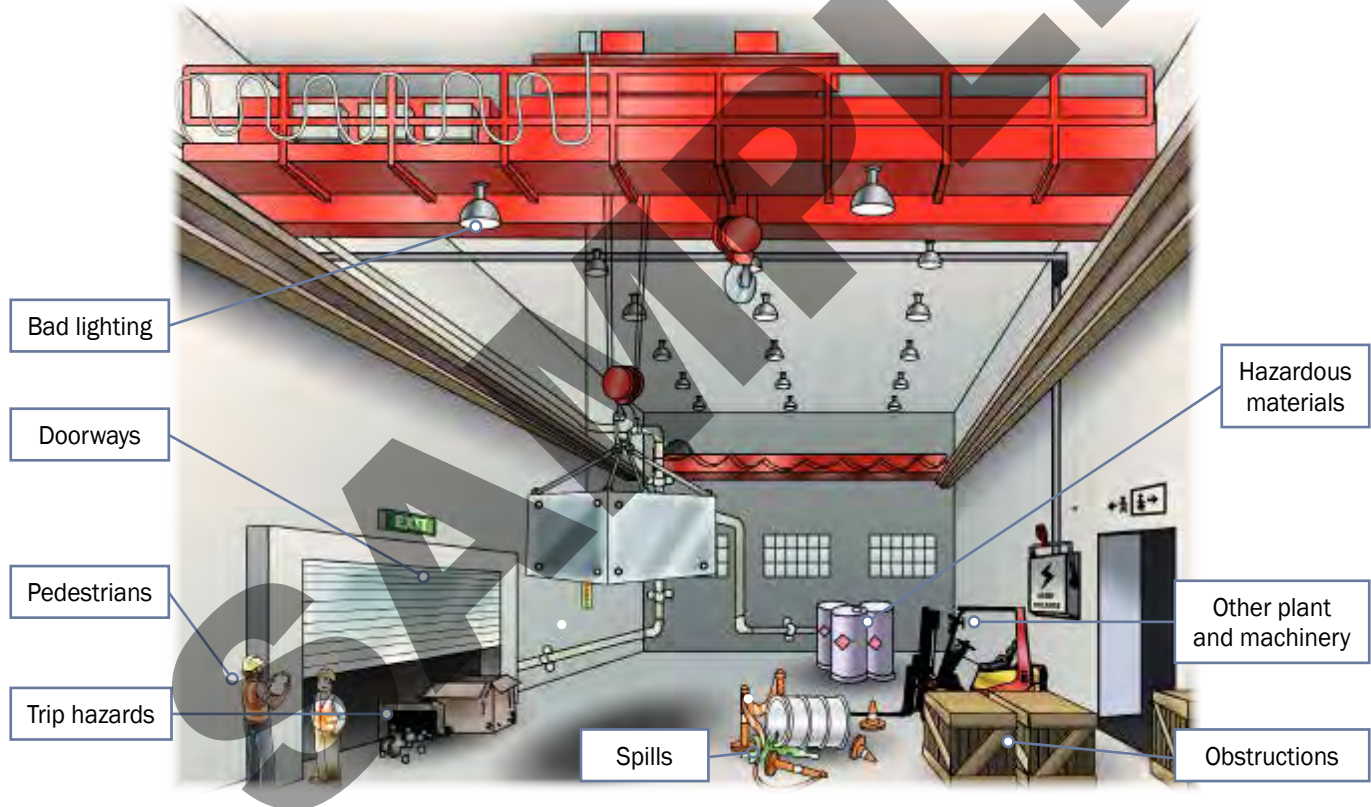
## Element 1



## Indoor hazards

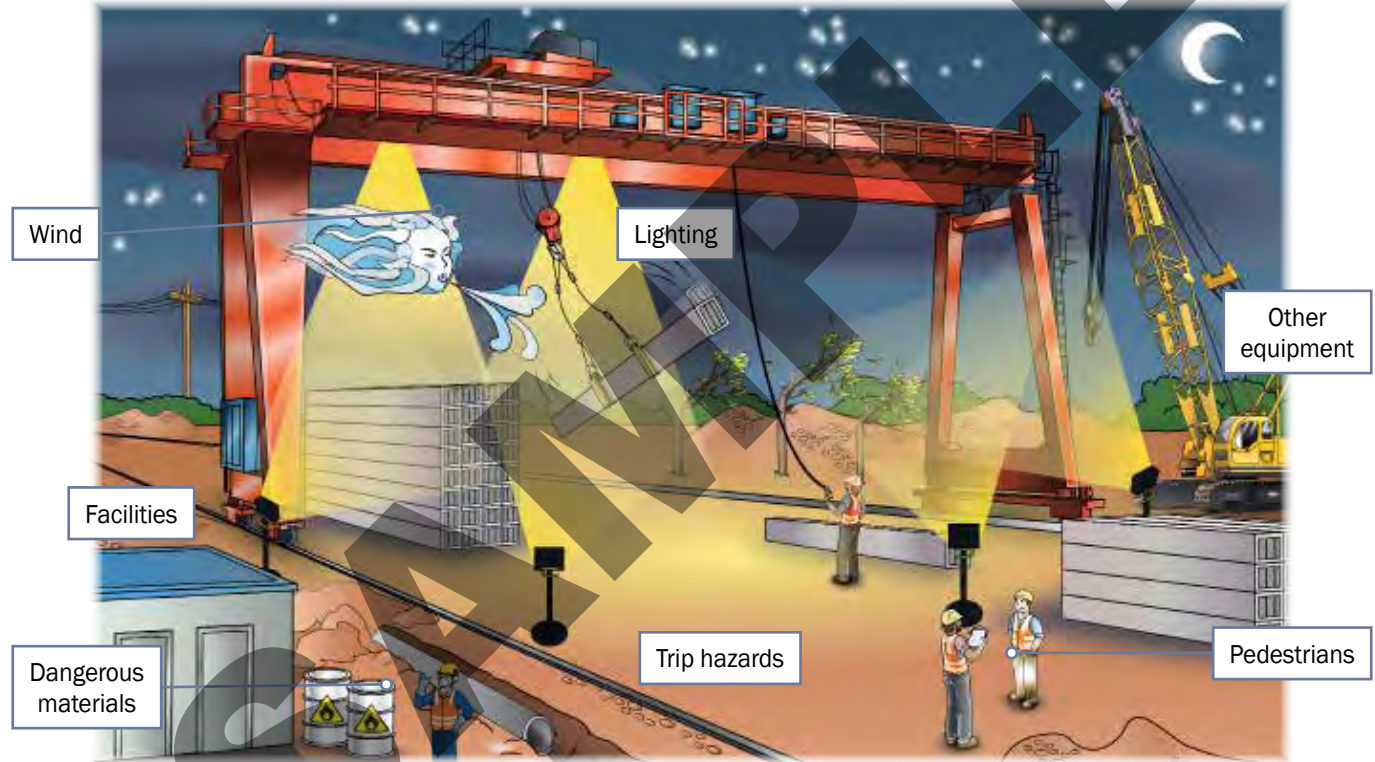
Before operating the crane you must make sure that any potential risks, hazards and environmental issues have been identified. You should check ground level, ground to eye level and above head height.

Some hazards you might find indoors can include:



## Outdoor hazards

Some hazards you might find outdoors can include:



# Trainer Value Pack



# Operate gantry/overhead crane

Element 2





## Prepare load for lift (crane capacity)

Before attempting to move a load with the crane you must know the capabilities of the crane. Information on the cranes capabilities and limits can be found in the operator's manual. The crane should also have a Safe Working Load or maximum capacity marked on it. This tells you the maximum weight the crane can lift. You will find this:

On the cranes data plate



Do not attempt to lift a load which is heavier than the cranes SWL or maximum capacity.





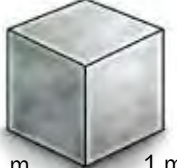



Marked on the body of the crane



## Prepare load for lift (load weight)

The load that is being moved (including hook and slings) must be less than the SWL or maximum capacity of the crane. The load weight should be marked on the load. If the load weight is not marked on the load it may be found:

<p>In manufacturer's information</p> 	<p>On an invoice or weighbridge document</p> 	<p>By asking experienced workmates</p> 
<p>By calculating</p>  <div data-bbox="207 884 470 1019" style="border: 1px solid black; padding: 5px;"> <p>20 kg × 10 = 200 kgs              Pallet weighs 15 kgs              200 + 15 = 215 kgs</p> </div>	<p>By estimating using common load weights</p> <div data-bbox="590 750 726 834" style="border: 1px solid black; padding: 5px;"> <p>Concrete block</p> </div>  <div data-bbox="582 924 1005 1019" style="border: 1px solid black; padding: 5px;"> <p>1 m × 1 m × 1 m = 1 m<sup>3</sup>              1 m<sup>3</sup> × 2400 = 2400 kg or 2.4 tonne</p> </div>	<p>By weighing the load</p> 

**QUESTION 18**

What should you use to help you with your pre-start and start-up checks?

This will also make your checks compliant.

You should use a daily inspection checklist, completed and signed pages should be kept in a safe place on site.

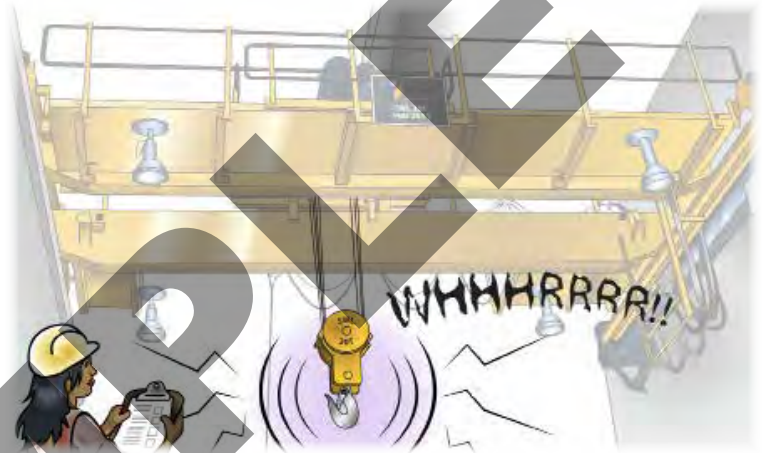


**QUESTION 19**

You are operating the crane and notice a strange noise and a vibration.

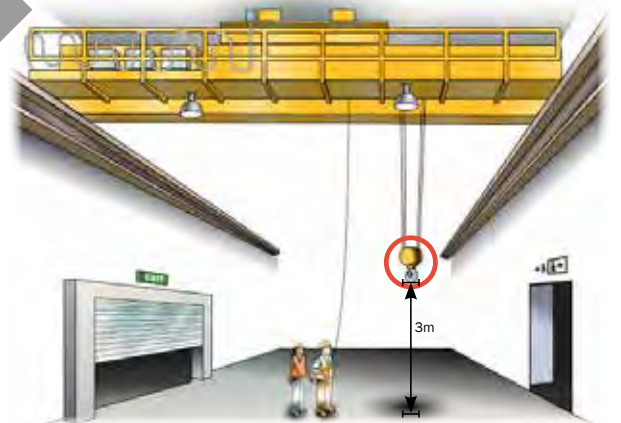
What could this mean?

This could indicate that there is a fault with the crane. You should bring the load to ground if it is raised and stop operation immediately.

**QUESTION 20**

How should the crane hook be positioned when you have finished for the day?

The crane hook should be left so it is approximately 3 m off the ground. The hook should not be left in a position where it is a hazard.



**QUESTION 21**

You are about to use the crane and there is a possibility that other vehicles could enter the cranes travel path.

What should you do?

A vehicle exclusion zone should be set up using signs, barriers and flashing lights.

**QUESTION 22**

The hierarchy of hazard control shows the steps you can take to control hazards in your work area.

List the steps from most effective to least effective.

- Eliminate,
- Substitute,
- Isolate,
- Engineering controls,
- Administrative controls
- Personal protective equipment (PPE).



# RECORD OF TRAINING LOGBOOK

## Overhead crane (Remote operated)

**RII COMPETENCY**

**RIIHAN305D –  
Operate a gantry or overhead crane  
(Remote operated)**



[www.easyguides.com.au](http://www.easyguides.com.au)



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SAMPLE

## Operate gantry/ overhead crane

(PC 2.2)

### Pre-start procedures

Look around the crane before you use it.

Check if there is any damage or anything wrong with the crane.

Description of work/training performed
<p>First I made sure that the main isolation switch was off. Then I used the daily inspection checklist to check the crane before I used it. When checking the fluid levels I found that the hydraulic fluid was low. I got some hydraulic fluid from the maintenance workshop and topped it up.</p>
<p>I made sure the main isolation switch was off. I noticed that one of the electrical collector wires was broken. I filled out a danger tag and put it on the main isolation switch. I then reported the problem to my supervisor.</p>
<p>I made sure the main isolation switch was off. I filled out the daily inspection checklist. I was checking some lifting gear when I noticed that some of the chain links seemed to be stretched. I told Mick who has a dogging licence to have a look. He said we needed to get another chain. I went to the workshop to get help with changing the chain.</p>



Date/time	No. of hours	Machine details	Supervising person
Date: <u>19 / 6 / 2015</u> Start time: <u>10.00</u> am ..... pm	<b>15</b> <b>minutes</b>	Make: <u>Hc</u> Model: <u>Single Girder</u> Serial No: <u>2278893</u> Max Capacity: <u>100 tonne</u> Span: <u>36 metres</u>	Name: <u>John McBain</u> Signed: <u>JB</u> Class: <u>Bridge &amp; Gantry</u> Cert No: <u>323 5651</u> State of Issue: <u>VIC</u> Issue Date: <u>26 / 01 / 2012</u> Expiry Date: <u>26 / 01 / 2018</u>
Date: <u>29 / 6 / 2015</u> Start time: ..... am <u>2.30</u> pm	<b>20</b> <b>minutes</b>	Make: <u>Hc</u> Model: <u>Single Girder</u> Serial No: <u>2278893</u> Max Capacity: <u>100 tonne</u> Span: <u>36 metres</u>	Name: <u>John McBain</u> Signed: <u>JB</u> Class: <u>Bridge &amp; Gantry</u> Cert No: <u>323 5651</u> State of Issue: <u>VIC</u> Issue Date: <u>26 / 01 / 2012</u> Expiry Date: <u>26 / 01 / 2018</u>
Date: <u>30 / 6 / 2015</u> Start time: <u>8.00</u> am ..... pm	<b>30</b> <b>minutes</b>	Make: <u>Hc</u> Model: <u>Single Girder</u> Serial No: <u>2278893</u> Max Capacity: <u>100 tonne</u> Span: <u>36 metres</u>	Name: <u>John McBain</u> Signed: <u>JB</u> Class: <u>Bridge &amp; Gantry</u> Cert No: <u>323 5651</u> State of Issue: <u>VIC</u> Issue Date: <u>26 / 01 / 2012</u> Expiry Date: <u>26 / 01 / 2018</u>



SAMPLE

# Plan and prepare for gantry/ overhead crane operations

- 1.1 Access, interpret and apply crane operation documentation and ensure the work activity is compliant.
- 1.2 Obtain, read, interpret, clarify and confirm work requirements.
- 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures.
- 1.4 Select and wear personal protective equipment appropriate for work activities.
- 1.5 Coordinate activities with others prior to commencement and throughout operations.



1

## Plan and prepare for gantry/overhead crane operations

(PC 1.1)

### Crane operation documentation

Make sure your work activities with the crane are compliant by checking documents like manufacturer's guidelines, specifications and standards.

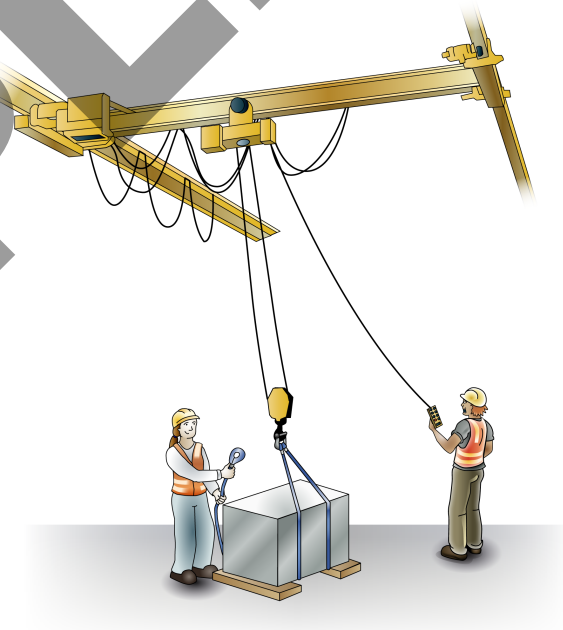
Description of work/training performed

SAMPLE

Date/time	No. of hours	Machine details	Supervising person
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....

# Operate gantry/ overhead crane

- 2.1 Prepare load for lift in accordance with crane limitations and rigging requirements.
- 2.2 Perform pre-start, start-up, park-up and shutdown procedures.
- 2.3 Confirm the work area hazards are removed or controlled prior to commencing the lift.
- 2.4 Interpret signals in accordance with AS2550.
- 2.5 Operate controls to lift, transfer and lower loads.
- 2.6 Monitor lift operations and ensure compliance.



## Operate gantry/ overhead crane

### (PC 2.1)

#### Prepare load

Prepare the load appropriately based on information you are given in your workplace procedures.

If you are not a qualified dogman you cannot make decisions on the rigging requirements.

Description of work/training performed

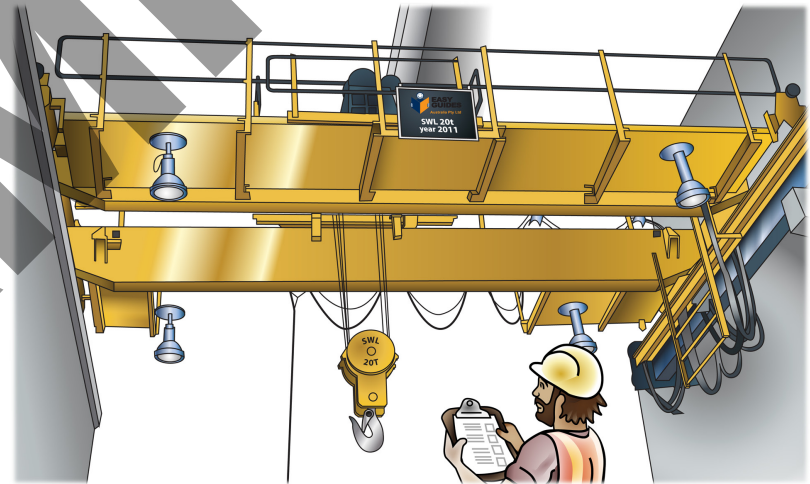
SAMPLE

Date/time	No. of hours	Machine details	Supervising person
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....
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# Perform gantry/overhead crane operator maintenance

- 3.1 Inspect crane for faults.
- 3.2 Perform routine operational servicing, lubrication and housekeeping tasks.
- 3.3 Process written records.



3

## **Perform gantry/ overhead crane operator maintenance**

(PC 3.1)

### **Inspect crane**

Do a post-operational check when you finish using the crane.

Description of work/training performed

SAMPLE

Date/time	No. of hours	Machine details	Supervising person
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....
Date: ..... Start time: ..... am ..... pm		Make: ..... Model: ..... Serial No: ..... Max Capacity: ..... Span: .....	Name: ..... Signed: ..... Class: ..... Cert No: ..... State of Issue: ..... Issue Date: ..... Expiry Date: .....
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# Mapping Tool

## RIIHAN305D Operate a gantry or overhead crane

**Note: This completed document shows that the enclosed learning materials have been mapped against the Unit of Competency.**

### Legend

PC	Performance Criteria
PE	Performance Evidence
KE	Knowledge Evidence

### Application

This unit describes a participant's skills and knowledge required to operate a gantry or overhead crane in the Resources and Infrastructure Industries.

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories and industry sectors. Relevant information must be sourced prior to application of the unit.

### Unit Sector

This unit is not sector specific.

### Section 1 – Performance Criteria

Performance Criteria (PC)	Learner Guide & Multimedia Presentation	Review Questions & Practical tasks		Assessment		RTO to fill out (Customised and additional materials, e.g. web sites, DVDs, handouts...)
		Review Questions	Practical Training Task	Knowledge	Practical	
<b>Element 1 Plan and prepare for gantry/overhead crane operations</b>						
1.1 Access, interpret and apply crane operational documentation and ensure the work activity is compliant	Element 1 - Compliance documents, Where to find WHS/OHS information.  Question 1, 2	Question 1-A, 1-B, 1-C	Task 1-A	Question 1-A, 1-B, 1-C	Task 1-A	
1.2 Obtain, read, interpret, clarify and confirm work requirements	Element 1 - Work requirements.  Question 3, 4	Question 1-D	Task 1-B	Question 1-D	Task 1-B	

Performance Criteria (PC)	Learner Guide & Multimedia Presentation	Review Questions & Practical tasks (Formative Assessment)		Summative Assessment		RTO to fill out (Customised and additional materials, e.g. web sites, DVDs, handouts...)
		Review Question	Practical Training Task	Knowledge	Practical	
<b>Element 1 Plan and prepare for gantry/overhead crane operations</b>						
1.3 Identify and address potential risks, hazards and environmental issues and implement control measures	Element 1 - Indoor hazards, Outdoor hazards, environmental hazards, overhead powerlines on poles, overhead powerlines on towers, The hierarchy of hazard control, How to remember the hierarchy of hazard control, Job safety and environmental analysis, safe work method statement.  Question 5, 6, 7, 8	Question 1-E, 1-F, 1-G, 1-H, 1-I, 1-J	Task 1-D	Question 1-E, 1-F, 1-G, 1-H, 1-I	Task 1-C	
1.4 Select and wear personal protective equipment appropriate for work activities	Element 1 - Personal protective equipment  Question 9, 10	Question 1-K, 1-L	Task 1-C	Question 1-J	Task 1-D	
1.5 Co-ordinate activities with others prior to commencement and throughout operations	Element 1 - Co-ordinate activities  Question 11, 12	Question 1-M	Task 1-B	Question 1-K	Task 1-E	

Performance Criteria (PC)	Learner Guide & Multimedia Presentation	Review Questions & Practical tasks (Formative Assessment)		Summative Assessment		RTO to fill out (Customised and additional materials, eg. web sites, DVDs, handouts...)
		Review Question	Practical Training Task	Knowledge	Practical	
<b>Element 2 Operate gantry/overhead crane</b>						
2.1 Prepare load for lift in accordance with crane limitations and rigging requirements	Element 2 - Prepare load for lift (crane capacity), prepare load for lift (load weight), prepare load for lift (lifting gear)  Question 13, 14, 15, 16	Question 2-A, 2-B, 2-C, 2-D, 2-E, 2-F, 2-G, 2-H, 2-I, 2-J, 2-K	Task 2-B	Question 2-A, 2-B, 2-C, 2-D, 2-E, 2-F, 2-G, 2-H	Task 2-B	
2.2 Perform pre-start, start-up, park-up, and shutdown procedures	Element 2 - Pre-start/ start-up procedures, crane controls, testing the crane, park-up/shut down procedures, post use inspection  Question 17, 18, 19, 20	Question 2-L, 2-M, 2-N, 2-O, 2-P	Task 2-A	Question 2-I, 2-J, 2-K, 2-L, 2-M, 2-N	Task 2-A	
2.3 Confirm the work area hazards are removed or controlled prior to commencing the lift	Element 2 - Confirm hazards are removed/control hazards  Question 21, 22	Question 2-Q	Task 2-C	Question 2-O, 2-P	Task 2-C	