



# Waste Management

**Practice Aptitude Quiz** 

### **Part 1: About this quiz**

Use this quiz to prepare for an Apprenticeship in Waste Management

This quiz:

- · Is NOT a formal assessment tool or pre-requisite for any job application
- Shows key learning standards for the Waste Management industry
- Has been developed with the help of industry leaders, TAFE and high schools

#### Quiz details

This quiz will:

- Take approximately 90 minutes to complete
- Ask you numeracy and literacy questions specific to the Waste Management industry
- Assess your literacy and numeracy at a Year 10 standard
- Allow you to use a calculator
- Share correct answers at the end

#### Who should take this quiz?

You should complete this quiz if you:

- Are thinking about starting an Apprenticeship in the Waste Management industry
- Want to practise for a formal aptitude test

#### Need help with your literacy and numeracy skills?

If you want to improve your literacy and numeracy skills, reach out to any of the below:

- Australian Apprenticeship Support Network providers
- Your Registered Training Organisation when you start training
- Reading Writing Hotline: 1300 655 506 www.readingwritinghotline.edu.au
- · Careers advisers and your teachers (if you're in high school)

#### More information about the Waste Management industry

Visit www.yourcareer.gov.au/industries/d/electricity-gas-water-waste-services

On this page you'll be able to:

- See the most popular Waste Management occupations
- · Get general information and statistics about the industry
- Search for Waste Management courses

#### How to use this quiz

This is an interactive form that can be filled out on your computer.

You can either:

- Fill it out on your computer; OR
- Print it out; OR
- Write your answers down on paper as you go.

Use the answers section at the end of the quiz to see how you went.

#### How to complete this quiz on your computer

- 1. Download and save the quiz onto your computer
- 2. Open the file from your computer
- 3. Fill in the form using a keyboard and mouse

### **Part 2: The Quiz**

#### Section 1: Language and Literacy

#### **1.** Put the following words in alphabetical order:

| Words             | Alphabetical Order |
|-------------------|--------------------|
| Composting        |                    |
| Landfill          |                    |
| Transfer stations |                    |
| Asbestos          |                    |
| Recycling         |                    |
| Medical           |                    |
| Transport         |                    |
| Waste             |                    |
| Paper             |                    |
| Plastic           |                    |

# 2. The following text has four errors in the spelling or punctuation. Identify the errors and write them correctly below:

This transfer station does not acept items such as cardbord boxes or chemicals in contanors made from metal or plastic. We will accept chemicals in an aproved drum that is sealed tight.

#### **3.** Read the following passage and answer the questions that follow:

John drives a recycling truck and collects recycling bins for "Gordon Recycling", a company that is contracted by a local council to provide a recycling service to their residents.

During his daily run John makes a trip to the recycling centre to unload the truck then resumes his daily run to complete the bin pickups for his designated area.

When John returned to his designated area he received a mobile phone call from his supervisor indicating that the council had received concerns from two residents. The first resident, who resided on Smith Street, was upset that his bin had been missed earlier in the morning and would like to have it collected.

The second resident, from Thompson Road, was concerned his bin would not be collected because he had excess recycling due to a party he had had over the weekend. John's supervisor asked if he could assist the resident if he had available space in his collection vehicle.

As John was still completing his daily run he thought he would drive by Smith Street to collect the bin he missed. When he arrived, the resident stated he had slept in and forgot to put his bin out and hoped he hadn't caused John any trouble.

John spoke with the resident and explained to him that the council monitors concerns about contractors such as his company. He said his company must respond to the council to show that they are providing the recycling service correctly, and that the residents are satisfied with the service.

John said that he would indicate the resident had slept in so his supervisor could close off his report. The resident said he would ring the council back and say he had put his bin out late and compliment the driver and the recycling company for returning.

As his truck had just been unloaded, John then continued on to Thompson Road to discuss the second concern with a resident. John said he would be able to take the excess recycling this time as he had the room on his vehicle. John then informed the resident if he was planning another party he should contact council prior to the event to organise another bin and request an extra collection. John explained he didn't always have the room on his vehicle and he didn't want to refuse the residents' request or cause the resident to become upset.

John then rang his supervisor and informed him of the outcome of the concerns and the actions he took to rectify each situation. John explained both residents were very satisfied with the service and understood their requirements on collection day.

This allowed John's supervisor to complete the report on each concern and email them to the council. The report demonstrated that the company was meeting the service standards that the council requires them to maintain.

a. Why was John able to handle each concern immediately?

b. What did the resident who put his bin out late say he would do after talking to John?

c. What advice did John give to the resident in Thompson Road to ensure he does not have the same concern again?

d. Why does "Gordon Recycling" have to follow through on concerns?

e. Why is it important for John to relay the outcome of the concerns to his supervisor?

| ARRT Weighbridge – Smithfield |               |                  |                         |              |            |
|-------------------------------|---------------|------------------|-------------------------|--------------|------------|
| Date:                         | 23/06/2013    | Delivery Number: | 012345670               | Location:    | Smithfield |
| Time:                         | 10:00 am      | Transporter:     | John - Gordon Recycling | Waste Type   | Paper      |
| Gross:                        | 14 tonne      | Tare:            | 10 tonne                | Pay Rate:    | 4 tonne    |
| Price per tonne:              | \$100.00      | Total Payment:   |                         | Scanned out: | 10:10 am   |
| Authorised By:                | Peter W Bridg | е                |                         |              |            |

#### 4. Read the following invoice and answer the questions that follow:

- a. What is the date on this invoice?
- b. What is the name of the company that owns the weighbridge?
- c. What price is the paper per tonne?
- d. What is the value of the total payment for the load of paper?

5. The waste management industry presents many challenges with regards to manual handling. Below is a procedure used by many organisations within the industry. Read the following procedure and answer the questions that follow:

### **Safe Lifting Procedure**

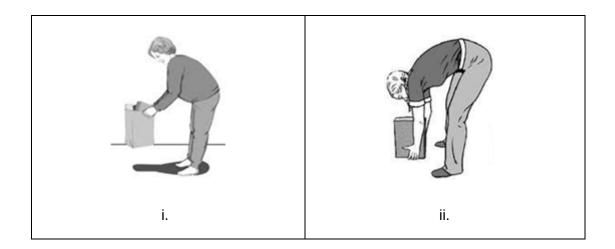
# To minimise the incidents of manual handling injuries staff should follow this procedure.

• Before you lift anything, assess the load so you know if it is very heavy.

If you must lift and carry heavy loads, use the following correct techniques:

- Keep the load close to the body to ensure you will not have to reach out to pick up.
- Lift with the thigh and leg muscles and have your feet well balanced so you do not overbalance.
- Lift with your legs, not your back.
- Keep your back as straight as possible.
- Get a firm grip with both hands so the load does not slip when lifting.
- When you pick up or set down a load, do not reach more than 10 inches away from your body.
- Lower your body without bending your back.
- Do not twist your body.
- Use two people to lift and move a heavy load.
- Use lifting hooks or fitting handles to loads to reduce reaching when lifting and carrying.
- Only do tasks you are trained to do.
- If you are not sure about how to lift any load, speak to your supervisor immediately for relevant procedures

- a. Why do you need to get close to the load before picking it up?
- b. Are the people in the pictures lifting safely according to the procedure? Why or why not *(explain below)*?



i.

ii.

c. What should staff do if they are not sure about how to lift a load?

#### 6. Match the words below with the matching sign or abbreviation in the table:

| Distance       | Weight       | Cubi | c Metre       | Speed | Currency |
|----------------|--------------|------|---------------|-------|----------|
| Sign or        | abbreviation |      | Matching word |       | ord      |
| kg             |              |      |               |       |          |
| km/hr          |              |      |               |       |          |
| cm             |              |      |               |       |          |
| m <sup>3</sup> |              |      |               |       |          |
| \$             |              |      |               |       |          |

- 7. A customer telephones a transfer station and asks how to dispose of the following waste items:
  - car tyres
  - cans of paint
  - bed mattresses

#### They are provided with the following information:

| Trading Hours                 | Disposal Fees               |
|-------------------------------|-----------------------------|
| Monday – Friday (8 am – 5 pm) | • Tyres \$5.00 per item     |
| Saturday (8 am – 1 pm)        | • Paint \$2.00 per tin      |
| Sunday (Closed)               | Mattresses \$15.00 per item |

Use the above information to answer the following questions:

a. What details about the waste items would you need to find out from the customer to ensure that you can calculate a price for the customer?

b. What would the total cost of the disposal be if the customer had the following?

4 car tyres 6 cans of paint 2 mattresses

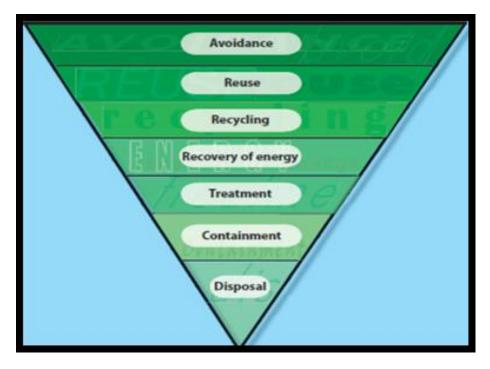
c. The customer has suggested he would most likely make the trip to the landfill on Saturday, is there any extra information you should explain or provide?

#### Waste identification, hazards and segregation:

The waste industry is committed to ensuring, where possible, that waste is considered for recycling or reuse.

For this to occur waste must be stored and collected correctly. Issues such as contamination can greatly reduce the chances of recovering the waste streams in collected waste. A simple mistake such as mixing plastic bags with paper in a collection bin can render the bin too contaminated to sort resulting in the load being sent to landfill.

Where possible we should refer to the following waste hierarchy chart to consider how different types of waste may be treated:



#### When considering this hierarchy keep the following in mind:

| Most Desirable        | WHY                               |
|-----------------------|-----------------------------------|
| Avoidance (or reduce) | Uses fewer resources              |
| Reuse                 | Costs less money & more efficient |
| Recycle               | Creates less waste                |

| Least Desirable | WHY                                |
|-----------------|------------------------------------|
| Treatment       | Uses more resources                |
| Containment     | Creates waste and not as efficient |
| Disposal        | Costs money for waste disposal     |

8. From the following list answer the questions below, keeping the "Waste Hierarchy" in mind:

| Using plastic bags for shopping                    | Steel                                 |
|--|---------------------------------------|
| Leaving lights on when not in a room               | Plastic water bottles                 |
| Tin cans   | Leaking taps                          |
| Glass bottles                                      | Food scraps                           |
| Timber   | Leaving appliances on when not in use |
| Clothing   | Concrete                              |
| Driving to work rather than using public transport | News papers                           |
| Using a bicycle                                    | Using energy saver light bulbs        |

a. What items on the list would it be beneficial to avoid?

b. What items can be recycled?

### 9. Match the waste type with the treatment process most likely to receive it: (Each facility may take more than one item)

| Plastics      | Asbestos    | Hospital waste | Paper         |
|---------------|-------------|----------------|---------------|
| Glass bottles | Cardboard   | Green waste    | Nappies       |
| Timber        | Pit water   | Television     | Oil/chemicals |
| Metal         | Food scraps | Mattresses     |               |

| Waste Type | Treatment process        |
|------------|--------------------------|
|            | Landfill                 |
|            | Organic recycler         |
|            | Recycling facility       |
|            | Transfer station         |
|            | Steel recycler           |
|            | Medical waste facility   |
|            | Water treatment facility |
|            | E-waste recycler         |

### 10. Vehicle Inspection – Study the vehicle checklist below and answer the questions that follow. Additonal information is in the next page.

| Vehicle Inspection Form                        |               |                          |                     |
|--|---------------|--------------------------|---------------------|
| Driver   |               |                          |                     |
| Date   |               |                          |                     |
| Vehicle Rego                                   | WAS - 123     |                          |                     |
| Start Time & Odometer                          |               |                          |                     |
| Beak Time                                      | 11.45 am      |                          |                     |
| Finish Time & Odometer                         |               |                          |                     |
| Correct Personal protective<br>Equipment (PPE) | Vest<br>Boots | Long Sleeve shirt<br>Cap | Gloves<br>Sunscreen |
| Service Due                                    | Y N           |                          |                     |

#### Visual Check before starting vehicle:

| visual eneck before starting venicie. | AM | PM |
|---------------------------------------|----|----|
| ENGINE OIL                            | -  |    |
| TRANSMISSION OIL                      |    |    |
| WATER LEVEL                           |    |    |
| TYRE/WHEELS 100 psi                   |    |    |
| FUEL LEVEL                            |    |    |
| HEAD LIGHTS - TAIL LIGHTS             |    |    |
| INDICATORS                            |    |    |
| STOP LIGHTS                           |    |    |
| GAUGES                                |    |    |
| DRIVERS RUN BOOK - MAPS               |    |    |
| FIRE EXTINGUSHER                      |    |    |
| FIRST AID KIT                         | -  | -  |
| SUN SCREEN                            | -  | -  |
| WINDSCREN                             | -  | -  |
| MIRRORS                               | -  | -  |
|                                       |    |    |
| SEATBELTS.                            |    |    |
| CABIN NEAT/TIDY                       |    |    |
| EXTERIOR CLEAN                        |    |    |
| SIDE ARM GREESED                      |    |    |
| GRAB BELT OK                          |    |    |
| BOLTS & HOSES TIGHT                   | -  | -  |
| HYDRO – FLUID FULL                    |    | -  |
|                                       |    |    |
| Visual Check when vehicle is started: |    |    |
| REVERSE BEEPER                        | -  | -  |
| PARK BREAK TEST                       | -  | -  |
| WIPERS                                | -  | -  |
| 2 WAY RADIO                           | -  | -  |
| BEACON LIGHT                          | -  | -  |
| WORK LIGHTS                           | -  | -  |
| CAMERA                                | -  | -  |
| BRAKES OK                             | -  | -  |

| MATERIAL | WEIGHT | DOCKET NO |
|----------|--------|-----------|
|          |        |           |
|          |        |           |
|          |        |           |
|          |        |           |

| DRIVER NAME      |  |
|------------------|--|
| DRIVER SIGNATURE |  |

| Vehicle Fault | Reported by | Repaired By | Time & Date |
|---------------|-------------|-------------|-------------|
|               |             |             |             |
|               |             |             |             |
|               |             |             |             |
|               |             |             |             |
|               |             |             |             |

You are completing an inspection of the vehicle at the end of your shift. Complete the vehicle checklist on the previous page by including the following:

- a. The date is 25/3/14 & use you own name
- b. Report the following vehicle faults: right indicator not working, reverse beeper not working & left stop light not working
- c. The material is paper with a weight of 4000 kg & the docket number is 09876345
- d. The odometer at the beginning of the shift was 85000 and it now reads 85065

#### **Section 2: Numeracy**

Complete the following calculations with or without a calculator.

| 1. | Compl     | ete the following   | y addi      | tions:            |    |                       |           |                         |
|----|-----------|---------------------|-------------|-------------------|----|-----------------------|-----------|-------------------------|
|    |           | \$17.00<br>\$28.00  | b.<br>+     | \$3.50<br>\$0.48  | с. | \$5.70<br>+ \$3.60    | d.        | \$250.00<br>+ \$63.20   |
| 2. | <br>Compl | ete the following   | -<br>g subt | ractions:         |    |                       |           |                         |
|    | a.<br>-   | \$170.00<br>\$25.00 | <b>b.</b>   | \$38.50<br>\$9.48 | c. | \$155.70<br>- \$33.60 | <b>d.</b> | \$1250.00<br>- \$165.00 |

- 3. Cam is completing his collection round. The truck he is operating has a maximum capacity of 4000 kg collection space. If each bin Cam collects weighs 100 kg how many bins can he collect?
- 4. If Mick has a total capacity of 18 metres on his waste vehicle and he has collected 3.5 metres of waste from Mrs Huynh and 6.5 metres of waste from "Stewarts Chicken Farm", what is the total amount of metres Mick has collected?
- 5. At Branislav's resource recovery facility, space is at a premium with vehicles unloading food scraps, green waste and organic material. Branislav has 100 cubic metres of space for food scraps and is expecting a load of 13 cubic metres on top of the scheduled 17 cubic metres for the day. How much storage space does Branislav have left?

- 6. Jenny is an environmental officer for a local council. Jenny is completing information for a brochure on waste collection for an area within the council. After reviewing statistics Jenny notes there was 8 tonne of plastic bottles collected from 2000 homes. How many kilos were collected from each home? (1 tonne = 1000 kg)
- 7. A customer has given you a \$20.00 note to pay for depositing a trailer load of waste. The gate fee is \$13.75. How much change should you give?
- Pedro has spent his weekend collecting cans and has arrived at your depot.
  Pedro has collected 11 kilos of cans. For each kilo collected he receives \$4.50.
  How much money does Pedro receive for the cans?
- 9. A resident has requested a new garbage bin at a cost of \$36.40 and gives the cashier a \$50.00 note. How much change should the resident receive?
- 10. This month "All Waste" is providing a discount of 10% off the usual collection price. Katrina is asked to change the collection price on the website to reflect the monthly discount so customers can see the new reduced prices. What price should she write on the following collection options so they are 10% off the usual price? Complete the values.

| 3-metre skip bins: | 6-metre skip bins: | E-Waste:        |
|--------------------|--------------------|-----------------|
| \$95.00 per bin    | \$160.00 per bin   | \$5.00 per item |
| Reduced price:     | Reduced price:     | Reduced price:  |
| \$                 | \$                 | \$              |

- 11. Carly starts work at 6am and works an 8 hours shift driving a collection vehicle from a waste facility to the manufacturing site. The round trip takes approximately 2 hours to travel and she is required to have 2 fifteen-minute breaks per shift. How many trips can Carly make during her shift?
- 12. Brian completed his eight-hour shift on Thursday. His rate of pay is \$21.20 per hour and he is also paid an extra allowance of \$7.50 for working in a larger vehicle. What is his total pay for his shift?
- 13. Mike has an area of 8 metres wide, 6 metres long and 1 metre high to receive a delivery of construction waste. What is the total cubic capacity Mike has to receive the delivery?
- 14. Paula operates a liquid waste collection vehicle with the capacity to extract 3 litres of liquid waste per second. How many litres can Paula collect in one minute?

### **ANSWERS**

#### Section 1: Language and Literacy

| 1. | Asbestos   |
|----|------------|
|    | Composting |
|    | Landfill   |
|    | Medical    |
|    | Paper      |
|    | Plastic    |
|    | Recycling  |
|    | Transfer   |
|    | stations   |
|    | Transport  |
|    | Waste      |
|    |            |

| 2. | acept     | accept     |
|----|-----------|------------|
|    | cardbord  | cardboard  |
|    | contanors | containers |

- **3.** a. John was already 'on the road' completing his daily collection route, so he drove by Smith Street to collect the bin. This ensured he did not have to leave his route adding time to his daily collection run. As his truck had just been unloaded there was space for the extra waste the resident in Thompson Road wanted to recycle.
  - b. Ring the council and say he had put his bin out late and compliment the driver for returning to help.
  - c. To pre-arrange an extra bin from council as John doesn't always have the space on his collection vehicle.
  - d. The council monitors concerns which contractors such as "Gordon Recycling" must answer to show that they are providing the recycling service correctly, and that the residents are satisfied with the service.
  - e. To allow John's supervisor to complete the report on each concern and email them to the council. The reports demonstrated that the company was meeting the service standards that the council requires them to maintain.
- **4.** a. 23/6/13
  - b. ARRT Weighbridge Smithfield
  - c. \$100.00
  - d. \$400.00, appearing in the document as: **Total payment \$400.00**
- 5. a. To ensure you will not have to reach out to pick up.
  - b. i. No. The person is reaching out to pick up the item and is lifting without bending their knees.
    - ii. No. The person is not bending their knees when lifting and does not have a straight back.
  - c. Speak to your supervisor immediately for assistance.

| Sign or abbreviation | Matching word |
|----------------------|---------------|
| kg                   | Weight        |
| km/hr                | Speed         |
| cm                   | Distance      |
| m <sup>3</sup>       | Cubic metre   |
| \$                   | Currency      |

- 7. a. The quantity of each of the items.
  - b. 4 X car tyres \$20.00
    - 6 X tins of paint \$12.00
    - 2 X mattress \$30.00
    - Total: \$62.00
  - c. Yes, explain the operation hours for a Saturday and explain the landfill closes at 1pm not 5pm

#### 8. a. Avoidance:

6.

- Using plastic bags for shopping
- Plastic water bottles
- Leaving appliances on when not in use
- b. Recycle:
  - Plastic water bottles
  - Glass bottles
  - Timber
  - Steel
  - Newspapers

- Leaving lights on when not in a room
- Leaking taps
- Driving to work rather than using public transport
- Tin cans - Food scraps
  - Clothing
  - Concrete

| 9. | Waste type                                  | Treatment process        |  |
|----|---|--------------------------|--|
|    | Asbestos, Nappies                           | Landfill                 |  |
|    | Green waste, Food scraps                    | Organic recycler         |  |
|    | Plastic, Paper, Glass bottles,<br>Cardboard | Recycling facility       |  |
|    | Timber, Oil/chemicals,<br>Mattresses        | Transfer station         |  |
|    | Metal                                       | Steel recycler           |  |
|    | Hospital waste                              | Medical waste facility   |  |
|    | Pit Water                                   | Water treatment facility |  |
|    | Television                                  | E waste recycler         |  |

10.

| Driver | Persons Name |
|--------|--------------|
| Date   | 25/3/11      |

| Start Time & Odometer  | 85000 |
|------------------------|-------|
| Finish Time & Odometer | 85065 |

| MATERIAL | WEIGHT | DOCKET NO |
|----------|--------|-----------|
| paper    | 4000kg | 09876345  |

Vehicle Fault right indicator not working reverse beeper not working left stop light not working

#### Section 2: Numeracy

- **1.** a. \$45.00
  - b. \$3.98
  - c. \$9.30 d. \$313.20
  - u. \$313.20
- **2.** a. \$145.00
  - b. \$29.02
  - c. \$122.10 d. \$1085.00
- **3.** 40 bins
- 4. 10 metres
- 5. 70 cubic metres
- 6. 4 kilograms from each home
- **7.** \$6.25 change
- **8.** \$49.50
- **9.** \$13.60
- 10. \$85.50 for the 3-metre skip bin
  - \$144.00 for the 6-metre skip bin
  - \$4.50 for each E waste item
- 11. 3 trips
- **12.** \$177.10 total (169.60 + 7.50 for the allowance)
- 13. 48 cubic metres
- 14. 180 litres per minute