



Australian Government

A U S T R A L I A N  
A P P R E N T I C E S H I P S

Your Life. Your Career. Your Future.

# Mining and Quarrying

Practice Aptitude Quiz

# Practice Aptitude Quiz

## Part 1: About this quiz

Use this quiz to prepare for an Apprenticeship in Mining and Quarrying

This quiz:

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

### Quiz details

This quiz will:

- Take approximately 60 minutes to complete
- Ask you numeracy and literacy questions specific to the Mining and Quarrying industry
- Assess your literacy and numeracy at a Year 10 or 11 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 Mining and Quarrying 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](http://www.readingwritinghotline.edu.au)
- Careers advisers and your teachers (if you're in high school)

### More information about the Mining and Quarrying industry

Visit [www.yourcareer.gov.au/industries/b/mining](http://www.yourcareer.gov.au/industries/b/mining)

On this page you'll be able to:

- See the most popular Mining and Quarrying industry occupations
- Get general information and statistics about the industry
- Search for Mining and Quarrying industry courses

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## 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

# Practice Aptitude Quiz

## Part 2: The Quiz

### Section 1: Language and Literacy

1. Rearrange the following words in alphabetical order:

- Open Pit \_\_\_\_\_
- Explosives \_\_\_\_\_
- Mineral \_\_\_\_\_
- Safety \_\_\_\_\_
- Excavator \_\_\_\_\_
- Supervisor \_\_\_\_\_

2. The following are jobs you may find on a mine site. Match each job title to the appropriate job description below:

Mine  
Manager

Shotfirer

Haul Truck  
Driver

Miner

Human Resources  
Recruitment Officer

- a. Interviews and recruits new staff to fill vacant positions in the mine  
\_\_\_\_\_
- b. Operates the truck which moves material from the pit to the crusher  
\_\_\_\_\_
- c. Charges up blast holes and fires the explosives which create loose material for the shovel operator to put into the haul trucks  
\_\_\_\_\_
- d. Mines out ore and waste rock from the ore body  
\_\_\_\_\_
- e. Manages the daily running of the mine and responsible for safe and efficient production of the mined material  
\_\_\_\_\_

# Practice Aptitude Quiz

### 3. The following text has 11 spelling errors. List the mistakes below:

Occupational Helth and Safely is an important part of your everyday working life. The use of personal protective equitment is madatory in the workplase. Equitment can include googles, stell capped boots, hard hats and heat and fire resitent gloves. You muk read safety signs and be careful with haevy lifting.


### 4. Read the following about 'Duty of Care' and answer the questions below:

#### Duty of Care

All workplaces must follow state and territory Health and Safety Acts. While these differ slightly between states, they are always about creating and maintaining a safe and healthy working environment.

Out of these Acts comes duty of care legislation, which has different requirements for employers and employees. Duty of care means that everything within reason must be done to protect the health and safety of people at the workplace. This duty is placed on:

- Employers
- Employees
- any others who have an influence on hazards in a workplace.

The following table shows some of the major responsibilities under duty of care legislation for both employers and employees.

Employer's obligations	Employees obligations
Provide and maintain a safe workplace	Find out what you need to know to act safely
Provide training, information and supervision to all employees to ensure their health and safety	Follow instructions, safety rules and procedures relating to safety. For example report to the person in immediate authority when leaving work at the end of the shift
Provide adequate working conditions and facilities (light, air, space, protective equipment, sanitary facilities and meal areas)	Operational staff must use or wear the equipment provided (hard hat, gloves, ear and eye protection etc.)
Provide adequate information/signage/warning on potential hazards	Follow information, warning, safety and danger signs
Consult and co-operate with safety and health representatives	Co-operate with safety and health representatives
Keep record of injuries	Report hazards and injuries following site procedures
Monitor and review workplace conditions	Report potential hazards and unsafe conditions

# Practice Aptitude Quiz

- a. Who must follow state and territory Health and Safety Acts?
  
  
  
  
  
  
  
  
  
  
- b. What does 'Duty of Care' mean?
  
  
  
  
  
  
  
  
  
  
- c. Who has the obligation to provide a safe workplace?
  
  
  
  
  
  
  
  
  
  
- d. Who has the obligation to use or wear the equipment provided (hard hat, gloves, ear and eye protection etc.?)

**5. The six words below are misspelt. Correctly spell each one in the space provided:**

Suppervisor  
\_\_\_\_\_  
Produکشon  
\_\_\_\_\_  
Aliminium  
\_\_\_\_\_  
Excarvater  
\_\_\_\_\_  
Safty  
\_\_\_\_\_  
Exploshive  
\_\_\_\_\_

# Practice Aptitude Quiz

## 6. Read the following job descriptors and answer the questions that follow:

**Mobile Plant Operators** drive backhoes, bulldozers, excavators, front-end loaders, graders, scrapers, skid steer loaders, rollers and forklift trucks. The machines level, excavate, move and load earth, rock and other material. The job title may also be known as Bulldozer Operator, Earthmover, Grader Operator, Plant Operator, Quarry Face Loader, or Scraper Operator.

Mobile Plant Operators may perform the following tasks:

- Prepare machines for operation
- Load and unload equipment from low loaders and move it around work sites
- Select, change and operate special attachments such as winches, scrub clearers, rippers, pile drivers and rock-breaking hammers
- Work from drawings and markers under the direction of supervisors and engineers
- Back-fill trenches
- Break up paving, rock and similar material by operating hydraulic or pneumatic breakers
- Excavate or scrape earth, rock or rubble to the correct level and alignment
- Load trucks with excavated fill
- Drive machines to and from work sites
- Service equipment by cleaning, lubricating and re-fuelling it and make minor adjustments and repairs when necessary
- Maintain duty of care for other users and work to Occupational Health and Safety requirements.

**Haul Truck Drivers** drive haul trucks (also known as dump trucks) which are off-highway, two-axle, rigid trucks specifically engineered for use in high production mining and heavy-duty construction environments.

In the mining and surface extraction industry drivers may perform the following tasks:

- Check brakes, oil, tyres, electrical systems, water, hydraulic and air
- Load (or supervise loading) material onto the truck
- Transport material to destination
- Maintain log books;
- Service equipment by cleaning, lubricating and re-fuelling it and make minor adjustments and repairs when necessary
- Maintain duty of care for other users and work to Occupational Health and Safety requirements.

# Practice Aptitude Quiz

## Questions:

- a. Name three types of machines that a Mobile Plant Operator may drive:
  
  
  
  
  
  
  
  
  
  
- b. Name two of the special attachments mobile plant vehicles may use:
  
  
  
  
  
  
  
  
  
  
- c. Can a haul truck be used to excavate earth and back-fill trenches? Select the correct response:
  
  
  
  
  
  
  
  
  
  
- d. Is a Haul Truck Driver usually responsible for the everyday vehicle maintenance such as checking the brakes, oil and tyres? Select the correct response:

YES

NO

YES

NO

## Section 2: Numeracy

A calculator may be used

1. Which unit from the table below would you use to measure the following?

kg	ml	km/hr	m <sup>2</sup>
\$	m	min	°C

- a. Length  
\_\_\_\_\_
- b. Time  
\_\_\_\_\_
- c. Temperature  
\_\_\_\_\_
- d. Weight  
\_\_\_\_\_
- e. Area  
\_\_\_\_\_
- f. Speed  
\_\_\_\_\_
- g. Volume  
\_\_\_\_\_
- h. Currency  
\_\_\_\_\_



# Practice Aptitude Quiz

2. A Caterpillar 793 Haul truck has a fuel tank capacity of 4,354L. If diesel costs the mine \$1.50 per Litre, how much does it cost the mine to fill the truck?

3. Express the following as decimals:

a.  $\frac{1}{4}$

---

b.  $26.25 + 54.5 - 30.3$

---

c.  $7 \times 2 \div 5$

---

d.  $10 \div 4 + 3 \div 2 + 5 \div 4$

---

4. Solve the following:

a.  $4,562 - 1,287$

---

b.  $86 + 22 - 16$

---

c.  $-25 + 82 + 5$

---

5. Multiply the following:

a. 53.86 by 10

---

b. 25.4 by 3

---

c. 128.5 by 10

---

6. Divide the following:

a. 2.56 by 10

---

b. 1,024 by 8

---

c. 256 by 4

---

7. The Caterpillar 793 haul truck has a Gross Vehicle Mass (GVM) of 383 tonnes and it has a nominal payload of 218 tonnes. What percentage of the truck's GVM is the load it can carry? (Calculate to one decimal place.)

# Practice Aptitude Quiz

8. As a plant operator Rebecca earns \$1,500 per week and is awarded a pay rise of 2%. What is her new weekly wage?

## Section 3: General Knowledge

1. Personal Protective Equipment (PPE) includes clothing, equipment and substances designed to be worn by a person to protect them from risks of injury or disease. Which of the following is not an item of Personal Protective Equipment? Select the correct response.

Hard Hat                      Safety Glasses                      Steel Capped Boots                      Hammer

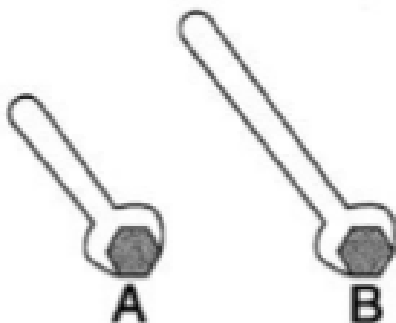
2. Which of the following is not a mined raw material? Select the correct response.

Silver                      Wood                      Sand                      Gold

3. Which of the following is not a commonly used mine site communication method? Select the correct response.

Mobile Phone                      UHF Radio                      Telegram                      Warning Signs

4. Which of the below wrenches will make it easier to tighten a bolt? Select the correct response.



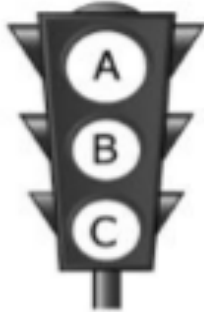
A

B

There is no difference

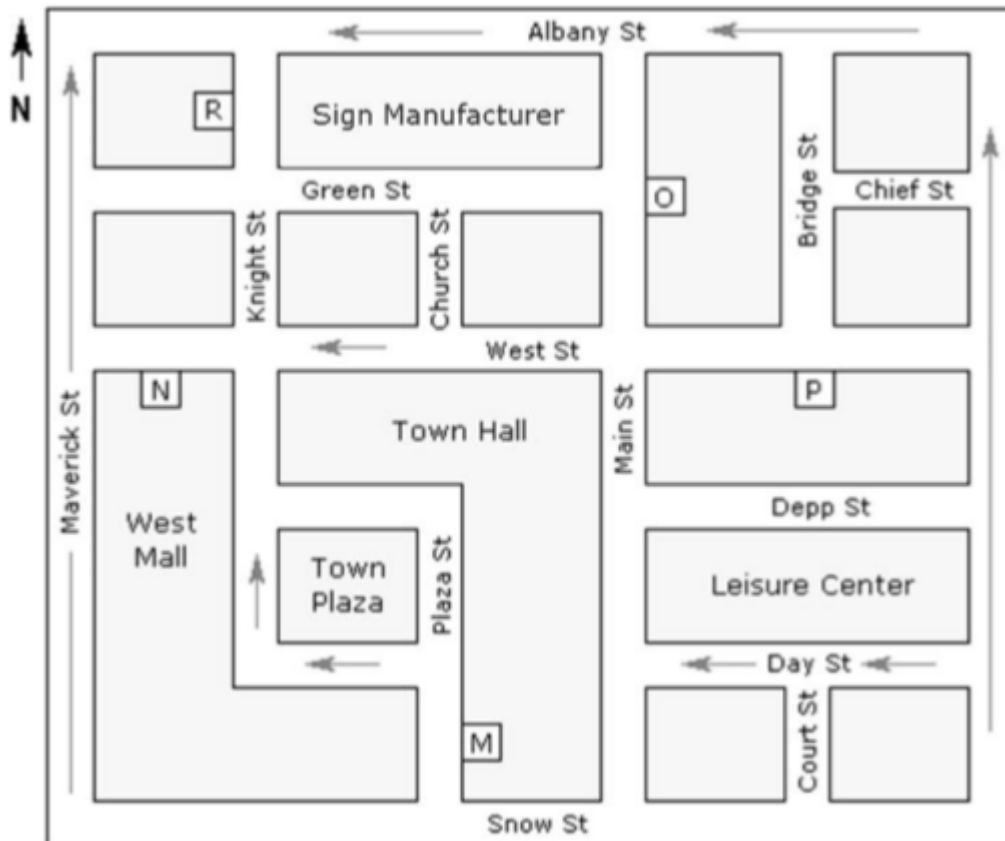
# Practice Aptitude Quiz

5. In this typical traffic signal, which light is the red one? Select the correct response.



- A
- B
- C

6. You are required to drive to the town nearest the mine to pick up some safety signage from the manufacturer. Look at the map below. You are in Depp St and can see the Town Hall to your right. What direction are you facing? Select the correct response.



- North
- South
- East
- West

# Practice Aptitude Quiz

7. Which is the most suitable tool for breaking up concrete? Select the correct response.



Tool 1

Tool 2

Tool 3

Tool 4

None

8. You are working on a mine site and see this sign on a track you want to use as a cut through to get to your worksite:



It looks like there is no-one in the area and you can't hear any noise of an explosion. Which is the best course of action? Select the correct response.

Use the track to get to your worksite as it is the most direct route

Avoid the track completely as directed by the warning sign

Run along the track quickly so that you are in the area for a minimal time, limiting any danger

# Practice Aptitude Quiz

9. You are working on a mine site and find yourself in an area of the site that you have not been to before. You see the sign below which you are also not familiar with:



What is your best course of action? Select the correct response.

Avoid the area now, and ask for clarification of the meaning of the sign

Ignore the sign. As you are unfamiliar with the meaning of 'STOPE' it must not be important

Ignore the sign now and ask someone what 'STOPE' means later

# Practice Aptitude Quiz

## ANSWERS

### Section 1: Language and Literacy

1. Excavator  
Explosives  
Mineral  
Open pit  
Safety  
Supervisor
2. a. Human Resources Recruitment Officer  
b. Haul Truck Driver  
c. Shotfirer  
d. Miner  
e. Mine Manager
3. Health, Safety, equipment, mandatory, workplace, Equipment, goggles, steel, resistant, must, heavy.
4. a. All workplaces.  
b. Duty of care means that everything within reason must be done to protect the health and safety of people at the workplace.  
c. The employer, employees and others in the workplace.  
d. All operational staff.
5. 

Supervisor
Production
Aluminium
Excavator
Safety
Explosive
6. a. Any three of: backhoes; bulldozers; excavators; front end loaders; graders; scrapers; skid steer loaders; rollers; and forklift trucks.  
b. Any two of: winches; scrub clearers; rippers; pile drivers; and rock-breaking hammers.  
c. No  
d. Yes

# Practice Aptitude Quiz

## Section 2: Numeracy

- m
  - min
  - °C
  - kg
  - m<sup>2</sup>
  - km/hr
  - ml
  - \$
- \$6,531.00
- 0.25
  - 50.45
  - 2.8
  - 5.25
- 3,275
  - 92
  - 62
- 538.6
  - 76.2
  - 1,285
- 0.256
  - 128
  - 64
- 56.9%
- \$1,530

## Section 3: General Knowledge

- Hammer
- Wood
- Telegram
- Wrench B as it is longer and provides more leverage.
- A
- South
- Tool 3
- Avoid the track completely as directed by the warning sign.
- Avoid the area now, and ask for clarification of the meaning of the sign.