



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.

# Information Technology

Practice Aptitude Quiz

# Practice Aptitude Quiz

## Part 1: About this quiz

Use this quiz to prepare for an Apprenticeship in Information Technology

This quiz:

- Is NOT a formal assessment tool or pre-requisite for any job application
- Shows key learning standards for the Information Technology 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 Information Technology industry
- Assess your literacy and numeracy at a Year 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 Information Technology
- 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 Information Technology industry

Visit [www.yourcareer.gov.au/industries/j/information-media-and-telecommunications](http://www.yourcareer.gov.au/industries/j/information-media-and-telecommunications)

On this page you'll be able to:

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

# Practice Aptitude Quiz

## 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. Write the following Information Technology (IT) terms in alphabetic order:

Optical drive	
Keyboard	
Mouse	
Network cable	
Monitor	
Solid state drive	
Operating system	

2. Read the following information and answer the questions that follow:

**Multimedia** is media and content that uses a combination of different content forms. Multimedia includes a combination of text, audio, still images, animation, video, and interactivity content forms.

**Wireless network** refers to any type of computer network that is not connected by cables of any kind.

**Broadband** in telecommunications refers to a signalling method that includes or handles a relatively wide range (or band) of frequencies. Broadband is always a relative term, understood according to its context. The wider (or broader) the bandwidth of a channel, the greater the information-carrying capacity, given the same channel quality.

A **cable** is two or more wires that are running side by side and are bonded, twisted or braided together to form a single assembly. An optical cable contains one or more optical fibres in a protective jacket that supports the fibres.

a. What are the benefits of a wider bandwidth?

# Practice Aptitude Quiz

b. List at least four examples of multimedia:

c. Is optical fibre used in a wireless network? Select the correct response.

YES

NO

d. Describe an optical cable:

**3. The following text has ten spelling or grammar errors. Correct the errors and list them in the order they appear in the text:**

It is everyone's responsibility to keep their workplace safe. Hasards can be items or situations that can ingure you. The best way to avoid hazards is to prevant them hapening in the first place. When using a computer it is the user's responsibillity to adjust the position of the computer screen, keyboard, and mouse then ajust the chair to allow the operator to use the computer safeley and comfortably with there body in an aproprate ergonomic posture.

- |          |           |
|----------|-----------|
| 1. _____ | 2. _____  |
| 3. _____ | 4. _____  |
| 5. _____ | 6. _____  |
| 7. _____ | 8. _____  |
| 9. _____ | 10. _____ |

# Practice Aptitude Quiz

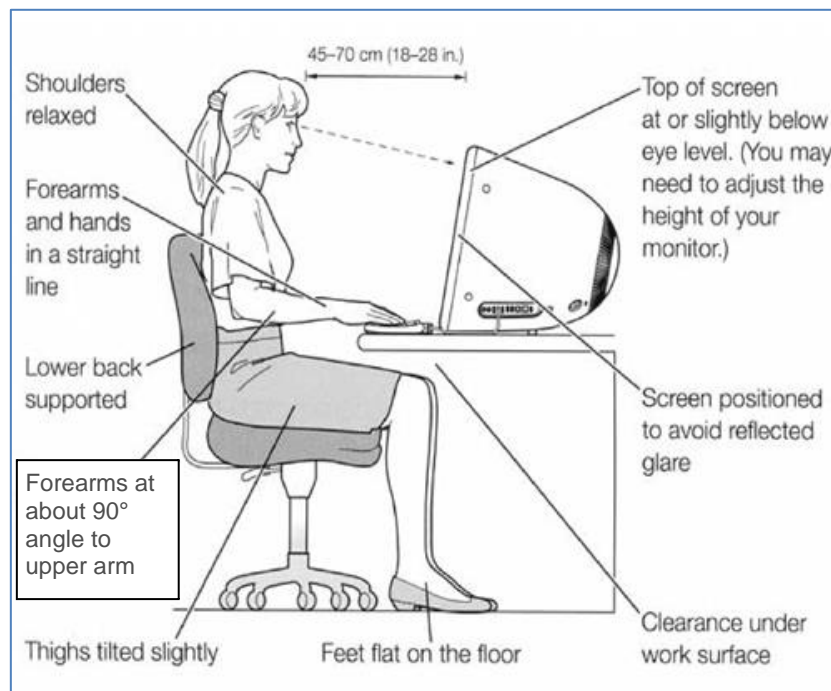
## 4. Read the following article about ergonomics and answer the questions that follow:

### Office Ergonomics

Ergonomics is concerned with "fitting work to people". It is the process of designing or arranging workplaces, products and systems so that they fit the people who use them.

A well-designed workstation can eliminate some office health hazards. Elements of good design include the appropriate chair, lighting, noise level, screen, keyboard and document position.

The diagram below shows you how you should set up your workstation for maximum posture benefit.



- Top of the screen at or slightly below eye level.
- Distance from operator a minimum of 45 cm, typically at an arm's length.
- Wrists should be a natural extension of the forearm, not angled up or down. Elbow relaxed. Lower arm open approximately 90° to upper arm.
- Adjust the back rest to accommodate the normal curve of the lower spine.
- Keyboard placed flat at elbow level and if required a palm rest to support hands during rest.
- Thighs approximately parallel to the floor.
- Easily adjustable seat height. Seat pan short enough (front to back) for knee clearance and with a waterfall front edge.
- Swivel chair with 5-point base and casters.
- Feet resting firmly on the floor. Use a footrest if feet are not supported by the floor.
- Document holder in line with front of monitor. Height and angle adjusted for the comfort of the user.

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- a. How should you place your feet when sitting at a workstation?
  
  
  
  
  
  
  
  
  
  
- b. What portion of the computer screen should be at or below eye level?
  
  
  
  
  
  
  
  
  
  
- c. List the six elements of good workstation design:
  
  
  
  
  
  
  
  
  
  
- d. Apart from your eyes, what six parts of the body assist with correct posture at a workstation?

# Practice Aptitude Quiz

## 5. Read the following article and answer the questions that follow:

The range and types of computers available to the user is increasing. Today we can use desktops, towers, media centres, personal video recorders (PVRs), laptops, netbooks, ultrabooks, personal digital assistants (PDAs), tablets, pads, and smartphones, to mention a few.

This is leading to changes in the demand for different types of computers. Computer users find that as the capabilities increase, size, weight and the price decreases. For users, the ease of connecting to the Internet increases and the usefulness and desirability of the equipment alters.

A number of factors are driving changes in the sizes of computers, including hardware miniaturisation, interface design, the speed, capacity and availability of data communications and price reduction as consequence of mass production and widespread adoption.

As a society, we are realising that electronic equipment no longer has the lifespan, or holds its stability of value, as appliances bought thirty years ago did. The build quality, reliability, design availability of spare parts and cost of repairs has changed our attitude to computer hardware.

As the price of computers continues to fall and their capabilities rapidly increase users are finding more benefits in upgrading or replacing their computers. The realisation of the lower actual value of their current computers means people are overcoming their resistance to disposing of the existing computer and spending money on updated equipment.

a. What is the key change in the physical size of computers? Select the correct answer.

No change

They're smaller

They're larger

b. Are computers becoming easier to repair? Select the correct answer.

YES

NO

c. What are the three basic changes to computers?



# Practice Aptitude Quiz

- d. Is the effective life of a computer becoming longer or shorter? Explain why/why not.

## Section 2: Numeracy

### 1. Round and calculate the following:

- a. 52.28565 to 2 decimal places  
\_\_\_\_\_
- b.  $4568.5 \times 10^{-4}$  to two decimal places  
\_\_\_\_\_
- c. 2 hours and 12 seconds to seconds  
\_\_\_\_\_
- d. 189 days to weeks  
\_\_\_\_\_
- e. 425.8 to the nearest ten  
\_\_\_\_\_

### 2. Sometimes it is necessary to round numbers up or down, especially when dealing with money. Round the following numbers:

- a. 789.322 to the nearest whole number  
\_\_\_\_\_
- b. \$10,234.12 to the nearest dollar  
\_\_\_\_\_
- c. \$35.6754 to dollars and cents  
\_\_\_\_\_
- d. 425.831 to two decimal places  
\_\_\_\_\_

### 3. Write as a number:

- a. Three thousand four hundred and twenty-four  
\_\_\_\_\_
- b. Thirty-six thousand and ninety-two  
\_\_\_\_\_

### 4. Write the following as words:

- a. 506  
\_\_\_\_\_
- b. 5,020  
\_\_\_\_\_
- c. 100,389  
\_\_\_\_\_
- d. 2,000,000  
\_\_\_\_\_

# Practice Aptitude Quiz

5. Rearrange in ascending order: (from smallest to largest)

5, -3,  $\frac{1}{2}$ , 0, -7, 4.1

6. How many hours and minutes from 8:45 am to 3:25 pm?

7. Which of the following represents the number 62,000,000,000 in scientific notation? Select the correct response.

$62 \times 10^{10}$

$6.2 \times 10^{10}$

$6.2 \times 10^{-10}$

$0.62 \times 10^{10}$

8. Which fraction is larger? Select the correct response.

a.  $\frac{3}{5}$   $\frac{1}{2}$

b.  $\frac{4}{9}$   $\frac{1}{3}$

# Practice Aptitude Quiz

9. Select the best estimate for the following by selecting the correct response:

a.  $4249 \times 71$

280,000

150,000

28,000

43,000

b.  $80,000 \div 38$

200

2,000

20,000

4,000

10. Solve the following:

a.  $4562 - 1277$

---

b.  $86 + 22 - 16$

---

c.  $-25 + 82 + 5$

---

11. Multiply the following:

a.  $53.86 \times 10$

---

b.  $25.4 \times 3$

---

c.  $128.5 \times 10^{-2}$

---

12. Divide the following:

a.  $2.56 \div 10$

---

b.  $1024 \div 8$

---

c.  $256 \div 4$

---

# Practice Aptitude Quiz

**13. Solve the following:**

a.  $3 + 6 \times 4$

---

b.  $22 - 80 \div 4$

---

c.  $(25 + 50) \div (2 \times 12.5)$

---

d.  $(12 - 8) \times 3$

---

**14. Solve the following and express your answer as a fraction:**

a.  $\frac{1}{4} + \frac{1}{2}$

---

b.  $\frac{2}{9} + \frac{5}{6}$

---

c.  $3\frac{1}{4} - \frac{1}{8}$

---

**15. Evaluate the following:**

a. 10% increase from \$20

---

b. 120.8 cut to 25%

---

**16. Tania is an apprentice who earns \$520 per week and she receives a pay rise of 5%.**

**What is Tania's new weekly wage?**

# Practice Aptitude Quiz

**17. For a particular computer power supply, the input power is rated at 200 watts with an output efficiency of 80%.**

- a. What is the available output power, in watts?
  
  
  
  
  
  
  
  
  
  
- b. If 20% of input power is lost to heat, running the cooling fan and noise, how much is lost in watts?

**18. Express the following as a decimal:**

a.  $\frac{3}{5}$

---

b.  $26.25 + 54.5 - 30.3$

---

c.  $7 \times 2 \div 5$

---

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

---

**19. Remove the brackets and simplify the following:**

a.  $(2x + 3y) - (x - 2y)$

---

b.  $(4a - 2b) - (5b - 2a)$

---

**20. A cube has a volume of 8 cubic metres. If each side of the cube is doubled in length, what is its new volume in cubic metres?**

# Practice Aptitude Quiz

- 21. The ACME Computer Company's file storage is made up of two-drawer filing cabinets and four-drawer filing cabinets. They counted the number of cabinets and got 10. They counted the number of drawers and got 34. How many of two 2-drawer filing cabinets are there and four-drawer filing cabinets are there?**
- 22. Rohit runs an information technology consultancy that charges clients \$120 for the first hour, or part thereof, then \$2 per minute charged in 5-minute blocks for consultations, plus \$65 for written quotes. How much income will the consultancy generate from each client?**
- a. Client A has a two-hour consultation.
  - b. Client B has a one-and-a-half-hour consultation.
  - c. Client C also has a one-and-a-half-hour consultation and requests a written quote.

# Practice Aptitude Quiz

## Section 3: General I.T. Knowledge

Read the following glossary of terms as it will assist you to answer some of the questions that follow:

ADSL	<b>Asymmetric Digital Subscriber Line (ADSL)</b> is a type of Digital Subscriber Line technology, a data communications technology that enables faster data transmission over copper telephone lines than a conventional voiceband modem can provide. It does this by utilizing frequencies that are not used by a voice telephone call. A splitter, or DSL filter, allows a single telephone connection to be used for both ADSL service and voice calls at the same time. Asymmetric because it is faster from Internet to PC than the other way (also true of a 56K modem).
Bit	The smallest unit of information in a computer can either equal 0 or 1. Eight bits equal one <b>byte</b> .
Binary numeral system	Or <b>base-2 number system</b> represents numeric values using two symbols, 0 and 1. More specifically, the usual base-2 system is a positional notation with a radix of 2. Because of its straightforward implementation in digital electronic circuitry using logic gates, the binary system is used internally by almost all modern computers.
Bps	<i>(Bits Per Second)</i> A measure of how quickly information is being transferred, usually via a modem or network. Divide by ten to get an approximation of the number of characters per second ( <b>cps</b> ). See also <b>Kbps</b> , <b>Mbps</b> .
exe (or .exe)	<i>(EXEcutable; pr. "exie", "dot exie" )</i> A <b>file</b> which is usually the main part of a program. A program may consist of just an exe file and nothing else or there may be dozens of files, including more exes.
Gigabyte (or Gig)	Unit of measurement for pieces of information: approximately 1 billion bytes, 1 million kilobytes, or 1,000 megabytes. Hard disk sizes are usually measured in gigabytes. Often shortened to "GB", "Gig" or just G.
Malware	A catch-all term for software installed by stealth onto a PC for malevolent purposes (hence the name). These may include displaying unwanted ads ( <b>adware</b> ), installing software you didn't ask for, or spying on your activities ( <b>spyware</b> ) and reporting them back to the person spying on you.
Modem	<i>(MODulator/DEModulator)</i> A device for allowing computers to communicate over a phone line. May be built into the <b>motherboard</b> or an <b>expansion card</b> , or an external device plugged into one of the <b>serial ports</b> .
RAM	<i>(Random Access Memory; pr. "ram")</i> The computer's main <b>memory</b> , which it uses to hold whatever you are currently working on. The contents of RAM are lost when the computer is switched off. Adding more RAM is often the most cost-effective upgrade for an ageing or slow computer.
Trojan	A program similar to a <b>virus</b> which is disguised as something harmless like a game, but when launched actually sabotages or takes control of the computer on which it is running.

# Practice Aptitude Quiz

1. A computer can be connected to a broadband network using one of the following. Select the correct answer:

Memory stick

Modem

MP3 player

Internet

2. Describe the difference between Malware and Trojan:

3. What is the binary answer to the following?

111 + 011

4. What is the decimal value of the following binary terms?

a. 101

b. 111 + 011



# Practice Aptitude Quiz

5. Match the following abbreviations in the table below to the provided list of computer terminology:

- Text file
- Microsoft Word document
- Portable document
- Compressed file
- Multimedia file
- Markup language for web pages
- Bitmap image
- Compressed digital image

TXT	
JPG	
GIF	
ZIP	
PDF	
DOC	
AVI	
HTML	

# Practice Aptitude Quiz

## Answers

### Section 1: Language and Literacy

- Keyboard, Monitor, Mouse, Network cable, Operating system, Optical drive, Solid state drive
- Wider broadband has greater information-carrying capacity.
  - Text, audio, still images, animation, video, and interactivity.
  - NO
  - Optical cable contains one or more optical fibres in a protective jacket that supports the fibres.

<b>3. Incorrect</b>	<b>Correct</b>
Hasards	Hazards
ingure	injure
prevant	prevent
hapening	happening
responsibility	responsibility
keybord	keyboard
ajust	adjust
safeley	safely
there	their
apropriate	appropriate

- Firmly on the floor or on a footrest.
  - The whole screen.
  - Appropriate chair, lighting, noise level, screen, keyboard and document position.
  - Shoulders, forearms, lower back, thighs, feet and hands.
- They're smaller
  - NO
  - Increase in usefulness, reduction in size and reduction in price.
  - Shorter due to the build quality, reliability, design availability of spare parts and cost of repairs.

### Section 2: Numeracy

- 52.29
  - 0.46
  - 7212
  - 27
  - 430
- 789
  - 10234
  - 35.68
  - 425.83
- 3424
  - 36092
- Five hundred and six
  - Five thousand and twenty
  - One hundred thousand, three hundred and eighty nine
  - Two million
- 7, -3, 0,  $\frac{1}{2}$ , 4.1, 5
- 6 hours and 40 minutes

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- 7.  $6.2 \times 10^{10}$
- 8. a.  $\frac{3}{5}$                       b.  $\frac{4}{9}$
- 9. a. 280,000                  b. 2,000
- 10. a. 3285                      b. 92                      c. 62
- 11. a. 538.6                    b. 76.2                    c. 1.285
- 12. a. 0.256                    b. 128                      c. 64
- 13. a. 27                        b. 2                        c. 3                        d. 12
- 14. a.  $\frac{3}{4}$                         b.  $\frac{19}{18}$                       c.  $\frac{27}{8}$
- 15. a. \$22                        b. 30.2
- 16. \$546
- 17. a. 160 watts                b. 40 watts
- 18. a. 0.6                        b. 50.45                    c. 2.8                      d. 5.25
- 19. a.  $x + 5y$                     b.  $6a - 7b$
- 20. 64 cubic metres
- 21. Three 2-drawer and seven 4-drawer filing cabinets
- 22. a. \$240                      b. \$180                      c. \$245

## Section 3: General I.T. Knowledge

- 1. Modem
- 2. Malware covers all software installed for malevolent purposes such as unwanted ads, software you don't want or spying. Trojan is similar to a virus and is usually disguised as a game that sabotages or takes control of the computer on which it is running.
- 3. 1010
- 4. a. 5                              b. 10

5.

TXT Text file	TXT Text file
JPG	Compressed digital image
GIF	Bitmap image
ZIP	Compressed file
PDF	Portable document
DOC	Microsoft Word Document
AVI	Multimedia file
HTML	Markup language for web pages