Practice Aptitude Quiz

Information Technology
It is critical for young people to build their career management skills so they can make informed choices regarding their study and training options and navigate a pathway towards their occupation and career of choice.

This career development resource combines labour market information with a practical industry specific activity to help develop awareness about the skills needed to pursue a career pathway in Information Technology Industry.

PART 1: About the Information Technology Industry

1. The Information Technology Industry in a nutshell

Key sectors:

- Networking and network security
- Services and support
- Testing
- Database design and development
- Software development
- Systems analysis and design
- Systems administration and management
- Web and multimedia technologies
- Programming
- Interactive and digital games
- Digital media technologies
- National Broadband Network
- Digital reception technology
- Cloud computing

Information Technology is part of the broader Australian Information and Communications Technology (ICT) industry. ICT is a dynamic, ever changing industry covering a broad array of businesses in areas from computer hardware and software, networking and communications to the internet, telecommunications, multimedia and many more.

In summary, ICT deals with the use of a diverse range of technology tools and resources that include computers, smart phones, hand held devices and computer software to create, design, develop, convert, store, protect, process, transmit, and securely retrieve information.

ICT employment and occupations fall across all sectors and industries in Australia. Over 532,500 ICT workers were employed in all industries across Australia as at February 2009 (Source: ABS ).

Weekly average earnings for major occupations:

- Help Desk Assistant - $750
- Network Support Officer - $1,000
- IT Technician - $1,300
- Software Support Technician - $1,050
- Computer Support Technician - $1,300
- Network Technician - $1,350
- Network Operations Technician - $1,350
- Database Administrator - $1,300
- Network Support Technician - $1,050
- Webmaster Assistant - $1,450
- Network Administrator - $1,350
- Website Administrator - $1,450
- Website Tester - $1,300
- Software Tester - $1,300
- IT Analyst - $1,450
- Assistant Games Animator - $1,060
- Assistant PC Games Programmer - $1,025
- Digital Media Developer - $1,025

**Jobs and demand information**

**Help Desk Assistants** are usually the first point of contact for either external clients or internal customers who require help with problems or queries regarding technical issues with their computer. They provide basic advice and service to clients and assist with the migration to new technology. They also help people to effectively use computer software and hardware.

- Job prospects - Average
- Weekly earnings - $750
- Occupation size - 46,800

Potential entry level qualifications:

- Certificate III in Information, Digital Media and Technology
- Certificate IV in Information Technology Support

**ICT Support Technicians** provide support for the deployment and maintenance of computer infrastructure and web technology, and the diagnosis and resolution of technical problems.

- Job prospects - Above average
- Weekly earnings - $1,000
- Occupation size - 46,800

Potential entry level qualifications:

- Certificate IV in Information Technology Support
Computer Network Professionals research, analyse and recommend strategies for network architecture and development, implement, manage, maintain and configure network hardware and software, monitor and optimise performance, troubleshoot and provide user support.

- Job prospects - Good
- Weekly earnings - $1,350
- Occupation size - 32,600

Potential entry level qualifications:
- Certificate IV in Information Technology Support
- Certificate IV in Information Technology Networking

Webmaster Assistants design, create, produce and maintain web pages using relevant software packages. The designer’s objective is to create, in consultation with the clients, the flow or story of the website and the look of how information will be displayed.

- Job prospects - Above average
- Weekly earnings - $1,450
- Occupation size - Unknown

Potential entry level qualifications:
- Certificate IV in Web-Based Technologies

Website Administrators create and maintain the hardware and software required to run websites, and coordinate the content, quality and style of websites.

- Job prospects - Above average
- Weekly earnings - $1,450
- Occupation size - Unknown

Potential entry level qualifications:
- Certificate IV in Web-Based Technologies
- Certificate IV in Information Technology
- Certificate IV in Computer Systems Technology

Testers (Websites, Software or Networking) test new IT systems designs and repair design problems, test new system components and write reports of their findings.

- Job prospects - Above average
- Weekly earnings - $1,300
- Occupation size - 7,900

Potential entry level qualifications:
- Certificate IV in Information Technology Testing
Information Technology (IT) Administrators manage the day-to-day operations of IT systems to make sure that they run effectively. IT administrators work with IT managers to make sure that the computer system provides sufficient computing power to deliver the desired level of business performance.

- Job prospects - Above average
- Weekly earnings - $1,350
- Occupation size - 32,600

Potential entry level qualifications:
- Certificate IV in Web-Based Technologies
- Certificate IV in Information Technology
- Certificate IV in Computer Systems Technology
- Certificate IV in Information Technology Networking

Network Administrators provide operational support for and management of computer networks to ensure they run efficiently. The IT networks can range from internet and private networks to large communications networks.

- Job prospects - Above average
- Weekly earnings - $1,000
- Occupation size - 49,700

Potential entry level qualifications:
- Certificate IV in Information Technology Support
- Certificate IV in Information Technology Networking

Database Administrators make sure that the underlying technologies provide users with flexibility in the management, access, retrieval, sharing and configuration of the large amounts of data held by many ICT systems.

- Job prospects - Above average
- Weekly earnings - $1,300
- Occupation size - 32,500

Potential entry level qualifications:
- Certificate IV in Information Technology Support
- Certificate IV in Programming
- Certificate IV in Computer Systems Technology
- Certificate IV in Information Technology Networking
**Games Developers** design, create and produce basic computer or digital games. They work in games development teams with artists, programmers, producers and marketing staff.

- Job prospects - Above average
- Weekly earnings - $1,025
- Occupation size - 10,800

Potential entry level qualifications:
- Certificate IV in Digital Media Technologies
- Certificate IV in Digital and Interactive Games
- Certificate IV in Programming

**Systems Analysts** define software requirements and specifications and guide program design and development. The analyst's role sits between the initial business analysis stage and the detailed system design, building and programming stages of the systems development process.

- Job prospects - Good
- Weekly earnings - $1,500
- Occupation size - 26,300

Potential qualifications:
- Certificate IV in Computer Systems Technology
- Certificate IV in Systems Analysis and Design
- Diploma of Systems Analysis and Design
- Advanced Diploma of Information Technology Business Analysis

**About the Qualifications**
Every qualification includes an emphasis on “Employability Skills” or the skills that employers identify as playing a significant part in contributing to an individual’s effective and successful participation in the workplace.

Employability skills are non-technical skills. They are also sometimes referred to as generic skills, capabilities, enabling skills or key competencies.

Employability Skills are:

- **Communication skills** that contribute to productive listening and understanding, speaking clearly and directly and harmonious relations across employees and customers;
- **Teamwork skills** that contribute to productive working relationships and outcomes;
- **Problem-solving skills** that contribute to productive outcomes;
- **Initiative and enterprise skills** that contribute to innovative outcomes;
- **Planning and organising skills** that contribute to long and short-term strategic planning;
- **Self-management skills** that contribute to employee satisfaction and growth;
- **Learning skills** that contribute to ongoing improvement and expansion in employee and company operations and outcomes;
- **Technology skills** that contribute to the effective performance of tasks.
3. Career Pathways Websites


Other useful careers sites are:

- My Future - [www.myfuture.edu.au](http://www.myfuture.edu.au)

4. Job Hunting

Job vacancy website:


Job hunting hints and labour market information:

- Australian Apprenticeships Pathways - [www.aapathways.com.au](http://www.aapathways.com.au) Click on “Search” to find potential Australian Apprenticeships occupation ideas. You can also find Job Hunting hints in the “Self Help” menu item.
- My Future: Labour Market Information - [www.myfuture.edu.au/services/default.asp?FunctionID=5400](http://www.myfuture.edu.au/services/default.asp?FunctionID=5400) Click on the map or use the drop down menu to find general labour market information for your region including top occupations and incomes. Data is based on the most recently available census.

5. Useful Contacts

Here are some links to a range of support services, organisations and government agencies that may help with careers research and job hunting:

Support services:

- Job Services Australia providers work with eligible job seekers to develop an individually tailored Employment Pathway Plan. The plan maps out the training, work experience and additional assistance needed to find job seekers sustainable employment - [www.jobsearch.gov.au/provider/ProviderLocation.aspx?ProviderType=JNS](http://www.jobsearch.gov.au/provider/ProviderLocation.aspx?ProviderType=JNS)
5. Useful Contacts - continued

Industry Organisations:
› Innovation and Business Skills Australia - www.ibsa.org.au
› Australian Information Industry Association - www.aiia.com.au
› Internet Industry Association - www.iiia.net.au
› Australian Interactive Media Industry Association - www.aimia.com.au

Government Agencies:
› Department of Broadband, Communications and the Digital Economy - www.dbcde.gov.au/jobs
Part 2: About this Resource

Guidance

This Practice Aptitude Quiz is intended to be a general illustration of some of the key learning standards required of people attempting an Australian Apprenticeships entry level qualification in Information Technology.

The Quiz focuses on literacy, numeracy, comprehension and problem solving questions contextualised to this specific industry.

This Quiz has been developed with the assistance of industry, TAFE and the secondary school sector as a careers resource.

The quiz can be utilised by numerous organisations and people such as careers practitioners working with young people, Group Training Organisations and Job Services Australia providers working with job seekers.

The Practice Aptitude Quiz can be:

› Used by careers practitioners with individuals or in a class setting to provide general guidance on the level of study involved in undertaking an entry level qualification in this industry;
› Provided to people to enable them to practice their skills before sitting an actual aptitude test;
› Used by mathematics teachers as a guide to industry math requirements at the entry point of this particular Australian Apprenticeship career path;
› Used by teachers as classroom based activities for students in Year 12 VET Information Technology studies.

The level of reading, writing and arithmetical skills assessed by this quiz is equivalent to that of a typical young person at Year 11 level.

Please note that rates quoted in this assessment for various items, including pay rates, are not meant to reflect today’s values, but are used purely for mathematical purposes.

The Quiz should be able to be completed in approximately 60 minutes.

Calculators may be used to complete this practice exercise.

After the Quiz

There are a range of support services available to help you find out about courses that may help you improve your literacy and numeracy skills and also your readiness for work.

If you are still at school you should discuss any concerns you may have with your career adviser. Further information may also be provided by a Job Services Australia provider, an Australian Apprenticeships Centre, a Group Training Organisation or a training provider.
Useful Contacts

Here are some links to job seeker support services:

› Search for your local Australian Apprenticeships Centre - www.aapathways.com.au/Search/Australian-Apprentice-Centre


› Job Services Australia providers work with eligible job seekers to develop an individually tailored Employment Pathway Plan. The plan maps out the training, work experience and additional assistance needed to find job seekers sustainable employment - www.jobsearch.gov.au/provider/ProviderLocation.aspx?ProviderType=JNS&
Part 3: The Quiz

Section 1 - Literacy, Reading and Comprehension

Spelling

1. Write the following IT terms in alphabetic order:

<table>
<thead>
<tr>
<th>Optical drive</th>
<th>Keyboard</th>
<th>Mouse</th>
<th>Network cable</th>
<th>Monitor</th>
<th>Solid state drive</th>
<th>Operating system</th>
</tr>
</thead>
</table>

2. Read the following passage 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 running side by side and 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?
b. List at least four examples of multimedia.

________________________________________
________________________________________
________________________________________
________________________________________

c. Is optical fibre used in a wireless network? (Circle the correct response)

YES or NO

d. What is an optical cable?

________________________________________
________________________________________
________________________________________
________________________________________

3. The following text has ten (10) spelling errors. Correct the errors and list them in the order they appear in the text. List the mistakes below, as you find them.

It is everyone’s responsibility to keep their workplace safe. Hazards can be items or situations that can ingure you. The best way to avoid hazards is to prevent them happening in the first place. When using a computer it is the user’s responsibility to adjust the position of the computer screen, keyboard, and mouse then adjust the chair to allow the operator to use the computer safely and comfortably with their body in an appropriate ergonomic posture.

________________________________________
________________________________________
________________________________________
________________________________________

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

Office Ergonomics

Ergonomics is at its core about "fitting work to people". It’s 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 45cm, 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.

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?


Comprehension

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 change in the size 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 useful life, or holds its value, as appliances bought thirty years ago did. The build quality, reliability, designed in obsolescence, unavailability 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 physical size of computers? (Circle the correct answer)
   i. None
   ii. Smaller
   iii. Larger

b. Are computers becoming easier to repair? (Circle the correct answer)

c. What are the three basic changes to computers?

   __________________________________________
   __________________________________________
   __________________________________________

d. Is the effective life of a computer becoming longer or shorter and explain why?

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
Section 2 - Mathematics

Conversion and Rounding

1. Rounding & Conversion:
   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 tens

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 as words:
   a. 506
   b. 5,020
5. Rearrange in ascending order (from smallest to largest):

5, -3, ½, 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? (Circle the correct response)
   a. 62 x 10^{10}
   b. 6.2 x 10^{10}
   c. 6.2 x 10^{-10}
   d. 0.62 x 10^{10}

8. Which fraction is larger? (Circle the correct response)
   a. i. 3/5  or  ii. 1/2
   b. i. 4/9  or  ii. 1/3

Arithmetic (Addition, Subtraction, Multiplication and Division)

9. Select the best estimate for the following by circling the correct response:
   a. 4249 x 71
      i. 280,000
      ii. 150,000
      iii. 28,000
iv. 43,000

b. \( 80,000 \div 38 \)
i. 200
ii. 2,000
iii. 20,000
iv. 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. \( 256 \div 4 \)

13. Solve the following:
   a. \( 3 + 6 \times 4 \)
   b. \( 22 - 80 \div 4 \)
   c. \( (25 + 50) \div (2 \times 12.5) \)
   d. \( (12 - 8) \times 3 \)
Fractions

14. Solve and express your answer in fractions:
   a. \( \frac{1}{4} + \frac{1}{2} \)
   b. \( \frac{2}{9} + \frac{5}{6} \)
   c. \( 3 \frac{1}{4} - \frac{3}{8} \)

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 is awarded a pay rise of 5%. What is Tania’s new weekly wage?

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?

Decimals

18. Express as a decimal:
   a. \( \frac{3}{5} \)
   b. \( 26.25 + 54.5 - 30.3 \)
   c. \( 7 \times 2 \div 5 \)
   d. \( 10 \div 4 + 3 \div 2 + 5 \div 4 \)
Algebra

19. Remove the brackets and simplify the following:
   a. \((2x + 3y) - (x - 2y)\)
   b. \((4a - 2b) - (5b - 2a)\)

Ratios

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?

Problem Solving

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-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? Where:
   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.
### Section 3 - Specific knowledge

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADSL</strong></td>
<td>(Asymmetric Digital Subscriber Line) Asymmetric Digital Subscriber Line (ADSL) 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).</td>
</tr>
<tr>
<td><strong>Bit</strong></td>
<td>The smallest unit of information in a computer can either equal 0 or 1. Eight bits equal one byte.</td>
</tr>
<tr>
<td><strong>Binary numeral system</strong></td>
<td>Or base-2 number system 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.</td>
</tr>
<tr>
<td><strong>Bps</strong></td>
<td>(Bits Per Second) 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 (cps). See also Kbps, Mbps.</td>
</tr>
<tr>
<td><strong>exe (or .exe)</strong></td>
<td>(EXECutable; pr. &quot;exie&quot;, &quot;dot exie&quot;) A file 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.</td>
</tr>
<tr>
<td><strong>Gigabyte (or Gig)</strong></td>
<td>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 &quot;GB&quot;, &quot;Gig&quot; or just G.</td>
</tr>
<tr>
<td><strong>Malware</strong></td>
<td>A catch-all term for software installed by stealth onto a PC for malevolent purposes (hence the name). These may include displaying unwanted ads (adware), installing software you didn't ask for, or spying on your activities (spyware) and reporting them back to the person spying on you.</td>
</tr>
<tr>
<td><strong>Modem</strong></td>
<td>(MODulator/DEModulator) A device for allowing computers to communicate over a phone line. May be built into the motherboard or an expansion card, or an external device plugged into one of the serial ports.</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>(Random Access Memory; pr. &quot;ram&quot;) The computer's main memory, 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.</td>
</tr>
<tr>
<td><strong>Trojan</strong></td>
<td>A program similar to a virus 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.</td>
</tr>
</tbody>
</table>
1. A computer can be connected to a broadband network using one of the following. (Circle the correct response)
   a. Memory stick
   b. Modem
   c. MP3 Player
   d. 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. \[ 111 + 011 \]

5. Match the abbreviations to the computer terminology:

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

<table>
<thead>
<tr>
<th>TXT</th>
<th>JPG</th>
<th>GIF</th>
<th>ZIP</th>
<th>PDF</th>
<th>DOC</th>
<th>AVI</th>
<th>HTML</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 1 - Literacy, Reading and Comprehension

1. Keyboard, Monitor, Mouse, Network cable, Operating system, Optical drive, Solid state drive

2. a. Wider broadband has greater information-carrying capacity.
   b. Text, audio, still images, animation, video, and interactivity.
   c. NO
   d. Optical cable contains one or more optical fibres in a protective jacket that supports the fibres.

3. | Hasards | Hazards |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>injure</td>
<td>injure</td>
</tr>
<tr>
<td>prevent</td>
<td>prevent</td>
</tr>
<tr>
<td>hapening</td>
<td>happening</td>
</tr>
<tr>
<td>responsibility</td>
<td>responsibility</td>
</tr>
<tr>
<td>keyboard</td>
<td>keyboard</td>
</tr>
<tr>
<td>adjust</td>
<td>adjust</td>
</tr>
<tr>
<td>safely</td>
<td>safely</td>
</tr>
<tr>
<td>there</td>
<td>their</td>
</tr>
<tr>
<td>appropriate</td>
<td>appropriate</td>
</tr>
</tbody>
</table>

4. a. Firmly on the floor or on a footrest.
   b. The whole screen.
   c. Appropriate chair, lighting, noise level, screen, keyboard and document position.
   d. Shoulders, forearms, lower back, thighs, feet and hands.

5. a. ii. Smaller
   b. NO
   c. Increase in usefulness, reduction in size and reduction in price.
   d. Shorter due to the build quality, reliability, designed in obsolescence, unavailability of spare parts and cost of repairs.

Section 2 – Mathematical and Problem Solving Questions

1. a. 52.29   b. 0.46   c. 7212   d. 27
   e. 430

2. a. 789   b. 10,234   c. 35.68   d. 425.83

3. a. 3,424   b. 36,092

4. a. Five hundred and six
   b. Five thousand and twenty
   c. One hundred thousand, three hundred and eight nine
   d. Two million

5. -7, -3, 0, ½, 4.1, 5

6. 6 hours and 40 minutes

7. b. $6.2 \times 10^{10}$
8. a. \( \frac{3}{5} \)  
b. \( \frac{4}{5} \)

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. 3 2-drawer and 7 4-drawer filing cabinets

22. a. $240  
b. $180  
c. $245

**Section 3 – Specific Knowledge**

1. b. 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

   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
Contributions
This Practice Aptitude Quiz was developed by:

This website, part of the Australian Apprenticeships and Traineeships Information Service, provides sample Australian Apprenticeships job descriptions and links to more Australian Apprenticeships information and resources. The service is funded by the Department of Education, Employment and Workplace Relations.

**Innovation and Business Services Australia** - [www.ibsa.org.au](http://www.ibsa.org.au)
Innovation & Business Skills Australia (IBSA) is one of 11 Industry Skills Councils which have custodianship of all VET Education Training Packages. IBSA oversees 12 Training Packages in the following industry sectors: Financial Services, Education, Business Services, Cultural & Related Industries, Information & Communications Technology and Printing & Graphic Arts. IBSA works closely with industry, education and government to ensure that the qualifications in these sectors reflect real industry skill requirements and to build capability, professionalism, and innovative capacity in Australia’s workforce.

**University of Ballarat** - [www.ballarat.edu.au](http://www.ballarat.edu.au)
The University of Ballarat (UB) is Australia’s only regional multi-sector university. We are the third oldest site of higher learning in Australia, and offer secondary schooling, TAFE, higher education, and research opportunities. We have campuses including Mt Helen, SMB and Camp Street in Ballarat, and at Horsham, Stawell and Ararat. We also work with a range of partner institutes across Australia and globally.

**The Career Education Association of Victoria** - [www.ceav.vic.edu.au](http://www.ceav.vic.edu.au)
The CEAV is the Victorian peak body for secondary school career practitioners, work experience coordinators, VET coordinators and MIPS coordinators. The CEAV provides professional development opportunities for members and also works with business, industry, and the education and training sector.

Industry Training Australia (ITA) delivers consultancy services to government and non-government organisations in the education and training sector. ITA develops and delivers information and communication services, including the Australian Apprenticeships Pathways website, for service provider networks and the general public.

For enquiries about this Practice Aptitude Quiz contact the Australian Apprenticeships and Traineeships Information Service on 1800 338 022.

Page 26