

THE UNIVERSITY OF AUCKLAND

FIRST SEMESTER, 2016
Campus: City

COMPUTER SCIENCE

An Introduction to Practical Computing

TEST

(Time Allowed: ONE hour)

DIRECTIONS

1. Compare the test version number on the Teleform sheet supplied with the version number in the top left corner of this page. If they do not match, ask the test supervisor for a new sheet.
2. Enter your name and Student ID (in pencil) on the Teleform sheet and shade in the corresponding bubbles underneath. Your name and Student Id should both be entered left aligned. If your name is longer than the number of boxes provided, truncate it.
3. Answer all questions on the Teleform answer sheet provided.
4. Use a dark pencil to shade in your answers in the multiple choice answer boxes on the Teleform sheet. Check that the question number on the sheet corresponds to the question number in this question book. If you spoil your sheet, ask the supervisor for a replacement.
5. Each question is worth 2.5 marks. There are 40 questions.
6. Calculators are NOT permitted.

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MULTIPLE CHOICE QUESTIONS

For each question, choose the best answer according to the information presented in lectures. Select your preferred answer on the Teleform answer sheet by shading in the appropriate box in pencil. There are 40 questions. Each question is worth 2.5 marks.

Question 1

[2.5 marks] Which of the following is NOT a type of expansion card?

- (a) Sound Card.
- (b) Raid Controller.
- (c) Network Card.
- (d) SSD Card.
- (e) Graphics Card.

Question 2

[2.5 marks] To make use of a multi-core processor efficiently, a specific task needs to be:

- (a) carried out during a specific time.
- (b) carried out in parallel.
- (c) carried out sequentially.
- (d) carried out in the RAM.
- (e) carried out multiple times for error checking.

Question 3

[2.5 marks] A computer took 10 minutes to perform a calculation today. Using Moore's law (as taught in lectures), how long would we estimate a computer (of the same price) to take to complete the same calculation 3 years ago?

- (a) 100 minutes.
- (b) 60 minutes.
- (c) 20 minutes.
- (d) 40 minutes.
- (e) 30 minutes.

Question 4

[2.5 marks] Which of the following components is the fastest in terms of access speed?

- (a) USB.
- (b) SSD.
- (c) RAM.
- (d) Firewire.
- (e) HDD.

Question 5

[2.5 marks] How many different numbers can we represent using 6 bits?

- (a) 5
- (b) 32
- (c) 128
- (d) 64
- (e) 16

Question 6

[2.5 marks] What decimal number has the binary representation 110110?

- (a) 58
- (b) 32
- (c) 4
- (d) 128
- (e) 54

Question 7

[2.5 marks] Why do we use a binary system in computers?

- (a) It allows for easy human interpretation of different results.
- (b) It was the only convention all computer manufacturers could agree on.
- (c) It allows for quicker data access.
- (d) It provides two clearly distinct states for reliability.
- (e) It provides a large variety of different number representations.

Question 8

[2.5 marks] Exactly how many bytes are there in 2 KiB?

- (a) 1000
- (b) 2048
- (c) 1024
- (d) 1600
- (e) 2000

Question 9

[2.5 marks] Which of the following is an example of proprietary system software?

- (a) Linux.
- (b) Chrome Browser.
- (c) Microsoft Internet Explorer.
- (d) Microsoft Office.
- (e) Microsoft Windows.

Question 10

[2.5 marks] Which of the following statements is FALSE?

- (a) Open standard is normally governed by a non-profit organization.
- (b) Open standard is better at protecting data files against obsolescence of the application that created them.
- (c) Open standard is always better quality compared to proprietary standards.
- (d) Open standard is publicly open and free to use.
- (e) Open standard is not at risk of the vendor lock-in problem.

Question 11

[2.5 marks] Which of the statements below is FALSE?

- (a) Software copyright allows the creator to retain the rights to their creation but not the ideas behind them.
- (b) Software patents are only recognized in some countries.
- (c) Software patents allow the patent holder to retain control over the ideas and the inventions.
- (d) Software copyright is used by proprietary software companies to prevent the unauthorized copying of their software.
- (e) Software patents will last for the lifetime of the patent holder plus 70 years.

Question 12

[2.5 marks] Which of the following statements about GNU General Public License is FALSE?

- (a) Users have the right to use the source code.
- (b) Users have the right to redistribute the source code.
- (c) Users have the right to modify the source code.
- (d) Users have the right to copy the source code.
- (e) None of the above.

Question 13

[2.5 marks] Which of the following statements about packet-switching networks is FALSE?

- (a) A dedicated channel is established for the duration of a transmission.
- (b) No continuous connection is formed between the source and destination of a message.
- (c) Packet switching networks minimize transmission latency.
- (d) Parts of a message can reach the destination via a number of different routes.
- (e) Messages are broken down into packets.

Question 14

[2.5 marks] Which of the following lists has the events in the correct chronological order, from the earliest to the latest?

- (a) DNS created, TCP/IP created, WWW created, ARPANET created.
- (b) ARPANET created, TCP/IP created, DNS created, WWW created.
- (c) Sputnik launched, DNS created, WWW created, TCP/IP created.
- (d) TCP/IP created, ARPANET created, DNS created, WWW created.
- (e) TCP/IP created, ARPANET created, Sputnik launched, WWW created.

Question 15

[2.5 marks] Which network protocol is used to transfer computer files between a client and server on a computer network?

- (a) HTTP
- (b) SSH
- (c) FTP
- (d) UDP
- (e) POP3

Question 16

[2.5 marks] Which of the following statements best describes the difference between a LAN and a WAN?

- (a) A LAN is a linear area network, while a WAN is a waveform area network.
- (b) A LAN is a local area network, while a WAN is a wide area network.
- (c) A LAN is a loose transmission protocol, while a WAN is a wide transmission protocol.
- (d) A LAN is a linear arithmetic network, while a WAN is a waveform arithmetic network.
- (e) A LAN operates within a 5 km radius, while a WAN can operate over a radius of more than 5 km.

Question 17

[2.5 marks] Which of the following statements about instant messaging chat systems is FALSE?

- (a) Instant messaging allows people to chat with each other in real time.
- (b) Clients can chat to each other without passing through the server.
- (c) Instant messaging can support communication between many people at the same time.
- (d) Instant messaging is a form of asynchronous communication.
- (e) Instant messaging can be used to see if friends are online.

Question 18

[2.5 marks] Alex requires all emails he receives to be downloaded from the mail server to his laptop and the emails need to be deleted from the server after download. Which protocol should he use to receive his emails?

- (a) POP3
- (b) EMP
- (c) SMTP
- (d) IMAP
- (e) SIMPLE

Question 19

[2.5 marks] Given an email address `auckland@uoa.ac.nz`, which of the following is considered the domain name?

- (a) `ac.nz`
- (b) `auckland`
- (c) `uoa`
- (d) `uoa.ac.nz`
- (e) `@`

Question 20

[2.5 marks] Which of the following best describes phishing?

- (a) A malicious program installed on a system that stays concealed to avoid detection.
- (b) A program hidden within another seemingly innocuous program that produces copies of itself and inserts them into other programs or files.
- (c) A method of bypassing normal authentication procedures over a connection to a network.
- (d) A type of unsolicited bulk email of identical messages sent to numerous recipients.
- (e) An attempt to acquire sensitive information for malicious reasons, by masquerading as a trustworthy entity.

Question 21

[2.5 marks] Which of the following best describes a wiki?

- (a) A system that allows users to get better search results because it uses collaborative filtering techniques.
- (b) A system that allows users to add information onto a website but not change any pre-existing information.
- (c) A system that allows collaborative modification of its content and structure directly from the web browser.
- (d) A system that serves as a publicly accessible personal journal for an individual.
- (e) A system that monitors the modification of content within a blog.

Question 22

[2.5 marks] Which of the following wikis has the largest number of articles?

- (a) WikiMapia.
- (b) WikiHow.
- (c) Wikia.
- (d) WikiVoyage.
- (e) Wikipedia.

Question 23

[2.5 marks] Which of the following statements about Twitter is FALSE?

- (a) It was intended as a video blogging system.
- (b) It allows short messages to be sent.
- (c) It is a social networking service.
- (d) It enables registered users to send and read messages.
- (e) It is a type of micro-blogging application.

Question 24

[2.5 marks] Who created the first wiki?

- (a) Tim Berners-Lee.
- (b) Jimmy Wales.
- (c) Ward Cunningham.
- (d) Larry Sanger.
- (e) Richard Stallman.

Question 25

[2.5 marks] What was the original purpose of the World Wide Web?

- (a) To share music and images quickly and effectively.
- (b) To enable commerce to be carried out on the Internet.
- (c) For the military to communicate more effectively.
- (d) For researchers to share research documents.
- (e) For researchers to send emails.

Question 26

[2.5 marks] Which of the following statements about Google's PageRank is FALSE?

- (a) It is an algorithm used to find documents relevant to a particular keyword topic.
- (b) It works by counting the number and quality of links to a page to determine a rough estimate of how important the website is.
- (c) It is an algorithm used by Google Search to rank websites by their search engine results.
- (d) It was named after Larry Page.
- (e) None of the above.

Question 27

[2.5 marks] Which of the following has the components of a URL in the correct order?

- (a) Protocol, path, filename, domain.
- (b) Standard, path, domain, filename.
- (c) Protocol, domain, path, filename.
- (d) Protocol, path, domain, filename.
- (e) Standard, domain, path, filename.

Question 28

[2.5 marks] When entering credit card details on a website, which protocol would you expect the website to be using to ensure that your information is encrypted and secure?

- (a) FTP
- (b) HTTP
- (c) TCP
- (d) SSH
- (e) HTTPS

Question 29

[2.5 marks] What are slide-based presentation systems (e.g. PowerPoint) best suited to?

- (a) Presenting a scientific theory.
- (b) Demonstrating a process.
- (c) Sales presentations.
- (d) Teaching.
- (e) Presenting a detailed analysis.

Question 30

[2.5 marks] What should be the focal point of most presentations?

- (a) A series of relevant images.
- (b) One engaging video or animation.
- (c) A framework or model.
- (d) A set of concise bullet points.
- (e) **The presenter.**

Question 31

[2.5 marks] What are canvas-based presentation systems (e.g. Prezi) best suited to?

- (a) Showing a linear set of slides.
- (b) Presentations involving numerous complex transitions.
- (c) **Alternating between specifics and context.**
- (d) Presentations involving one or more complicated diagrams.
- (e) Presentations involving a series of videos.

Question 32

[2.5 marks] Which of the following is BAD advice for giving presentations?

- (a) **Use comprehensive bullet points to convey your message.**
- (b) End your presentation by thanking the audience.
- (c) Speak clearly and precisely.
- (d) Alternate between context and specifics.
- (e) Rehearse your presentation thoroughly.

Question 33

[2.5 marks] What string of letters is encoded by the ASCII codes 115 117 78?

- (a) sun
- (b) Sun
- (c) SUn
- (d) **suN**
- (e) None of the above.

Question 34

[2.5 marks] Which of the following statements about text editors is FALSE?

- (a) **All text editors allow the user to change the font.**
- (b) All text editors allow the user to edit the characters on the page.
- (c) Notepad is a text editor.
- (d) Many text editors allow word wrapping.
- (e) Many text editors store information as plain text (ASCII).

Question 35

[2.5 marks] WYSIWYG is an acronym for what?

- (a) What You Saw Is What You Give.
- (b) What You Saw Is What You Gave.
- (c) What You Suppose Is What You Give.
- (d) **What You See Is What You Get.**
- (e) What You Say Is What You Gave.

Question 36

[2.5 marks] What is the main difference between a header and a footer in a Word document?

- (a) A header is usually in a larger font than the footer.
- (b) The footer is usually centred while the header is not usually centred.
- (c) **A header goes at the top of a page while the footer is at the bottom of the page.**
- (d) The footnote is included in the footer, not the header.
- (e) All of the above.

Question 37

[2.5 marks] Which of the following statements about why to use LaTeX is FALSE?

- (a) It is free and runs on many platforms.
- (b) It is the best tool available for mathematical layout.
- (c) The results look better than the results produced by other word processors.
- (d) Its focus on structure helps document development.
- (e) **LaTeX is easy to use for beginners.**

Question 38

[2.5 marks] Which of the following statements about how LaTeX uses white space is FALSE?

- (a) Two or more consecutive white spaces are reduced to a single white space.
- (b) **Blank lines between paragraphs are ignored.**
- (c) White space characters include line break, tab and space.
- (d) Single white space characters between words are not ignored.
- (e) All of the above.

Question 39

[2.5 marks] Which of the following statements about the LaTeX verbatim environment is FALSE?

- (a) Text is displayed exactly as it appears.
- (b) It is often used for computer code.
- (c) The entire environment is indented.
- (d) It uses a monospace font.
- (e) All of the above.

Question 40

[2.5 marks] Which of the following statements about RefWorks is FALSE?

- (a) RefWorks enables users to copy references from the UOA library catalogue into a reference database.
- (b) RefWorks can be used to insert references into documents in a variety of citation styles.
- (c) RefWorks is platform independent.
- (d) RefWorks is software that was developed by the University of Auckland.
- (e) RefWorks can be used to maintain a personal database of references.