THE UNIVERSITY OF AUCKLAND

FIRST SEMESTER, 2015
Campus: City

COMPUTER SCIENCE

An Introduction to Practical Computing

TEST

(Time Allowed: ONE hour)

NOTE:
- Calculators are NOT permitted.

- Compare the test version number on the Teleform sheet supplied with the version number above. If they do not match, ask the test supervisor for a new sheet.

- Enter your name and student ID (in pencil) on the Teleform sheet. Your name and Student Id should both be entered left aligned. If your name is longer than the number of boxes provided, truncate it.

- Answer all questions on the Teleform answer sheet provided.

- 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.

- Each question is worth 2.5 marks. There are 40 questions.

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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] What is a processor's speed measured in?

   (a) Operations per minute or MB per second.
   (b) MB per second or hertz.
   (c) Operations per minute or hertz.
   (d) Operations per second or MB per second.
   (e) Operations per second or hertz.

Question 2
[2.5 marks] What is the difference between primary and secondary storage?

   (a) Primary storage is slower, more expensive and persistent.
   (b) Primary storage is faster, less expensive and persistent.
   (c) Primary storage is faster, more expensive and not persistent.
   (d) Primary storage is faster, less expensive and not persistent.
   (e) Primary storage is faster, more expensive and persistent.

Question 3
[2.5 marks] Which of the following sets of device lists has the devices correctly classified?

   (a) *Input:* keyboard, mouse, trackball, touchscreen
      Output: printer, mouse, speakers, touchscreen
   (b) *Input:* keyboard, mouse, trackball, touchscreen
      Output: printer, screen, speakers, touchscreen
   (c) *Input:* screen, mouse, trackball
      Output: printer, screen, speakers, touchscreen
   (d) *Input:* keyboard, mouse, trackball, touchscreen
      Output: keyboard, screen, speakers
   (e) *Input:* keyboard, screen, trackball, touchscreen
      Output: printer, screen, speakers

Question 4
[2.5 marks] How many different numbers can you represent with 5 bits?

(a) 32
(b) 31
(c) 40
(d) 5
(e) 64

Question 5
[2.5 marks] How many bits would you need to represent 72 colours?

(a) 8
(b) 5
(c) 6
(d) 7
(e) 9

Question 6
[2.5 marks] What is the decimal equivalent of the binary number 101101?

(a) 45
(b) 14
(c) 10
(d) 90
(e) 22

Question 7
[2.5 marks] Which of the following is TRUE?

(a) 100 MiB = 1 GB
(b) 100 MB = 1 GB
(c) 1000 MiB = 1 GB
(d) 1000 MB = 1 GB
(e) 1000 MB = 1 GiB

Question 8
[2.5 marks] Which of the following file extensions could a text document possibly have?

(a) png
(b) pdf
(c) exe
(d) mpg
(e) gif

Question 9

[2.5 marks] Which of the following lists of software comprises system software only?

    (a) Operating systems, device drivers, search engines.
    (b) Word, device drivers, web browsers.
    (c) Operating systems, Word, diagnostic and maintenance tools.
    (d) Latex, device drivers, diagnostic and maintenance tools.
    (e) Operating systems, device drivers, diagnostic and maintenance tools.

Question 10

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

    (a) GUIs are good for beginners and CLIs are good for experts and CLIs are more powerful.
    (b) CLIs are good for beginners and GUIs are good for experts and CLIs are more powerful.
    (c) CLIs are good for beginners and GUIs are good for experts and GUIs are less powerful.
    (d) GUIs are good for beginners and CLIs are good for experts and GUIs are more powerful.
    (e) CLIs are good for beginners and GUIs are good for experts and GUIs are more powerful.

Question 11

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

    (a) Software is loaded into secondary storage from primary storage and is then executed by the CPU.
    (b) Software is loaded into secondary storage from RAM and is then executed by the CPU.
    (c) Software is loaded into RAM from secondary storage and is then executed by the CPU.
    (d) Software is loaded into RAM from secondary storage and is then executed by the motherboard.
    (e) Software is loaded into secondary storage from RAM and is then executed by the motherboard.

Question 12

[2.5 marks] Which of the following statements best describes packet switching networks?

  (a) Messages are sent to the local exchange before moving through the central exchange nodes.
  (b) Messages are broken into packets, but must be sent in a predetermined order.
  (c) Messages are sent once a continuous connection is formed.
  (d) Messages are broken into packets, each of which is sent independently through nodes with equal authority.
  (e) Messages are broken into packets, but cannot be rerouted if a connection is broken.

Question 13

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

  (a) A LAN must be laid in a straight line, while a WAN can have a curve in it.
  (b) A LAN is a local area network, while a WAN is a wide area network.
  (c) A LAN is a linear area network, while a WAN is a waveform area network.
  (d) A LAN operates within a 10 km radius while a WAN can operate over a radius of more than10 km.
  (e) A LAN is a logic board for adding numbers whereas a WAN is a widget for adding numbers.

Question 14

[2.5 marks] What does the TCP protocol do?

  (a) The TCP protocol defines addresses for computers on the network and specifies the routing information.
  (b) The TCP protocol only divides the message into packets.
  (c) The TCP protocol only recombines packets to reform the message.
  (d) The TCP protocol translates names into IP addresses and vice versa.
  (e) The TCP protocol divides the message into packets, checks that all packets arrive, and recombines packets to reform the message.

Question 15

[2.5 marks] What does the IP protocol do?

  (a) The IP protocol recombines packets to reform the message.
  (b) The IP protocol divides the message into packets, checks that all packets arrive, and recombines packets to reform the message.
  (c) The IP protocol defines addresses for computers on the network and specifies the routing information.
  (d) The IP protocol divides the message into packets.
  (e) The IP protocol translates names into IP addresses and vice versa.

Question 16

[2.5 marks] Which of the following best describes the composition of an email address?

  (a) `localpart@domainname`, where "`localpart`" specifies a person's user account and "`domainname`" specifies the computer where the person's mail server resides.

  (b) `domainname@localpart`, where "`localpart`" specifies a person's user account and "`domainname`" specifies the computer where the person's mail server resides.

  (c) `domainname@localpart`, where "`localpart`" specifies a person's computer and "`domainname`" specifies the network where the person's computer resides.

  (d) `localpart@domainname` where "`localpart`" specifies a person's IP address and "`domainname`" specifies the network where the person's computer resides.

  (e) `localpart@domainname`, where "`localpart`" specifies a person's computer and "`domainname`" specifies the network where the person's computer resides.

Question 17

[2.5 marks] With regard to email, what does Bcc: mean?

  (a) Blind Computer Communication: The users specified in the Bcc: field will get the email and see the addresses in the to: and cc: fields.

  (b) Blind Carbon Copy: The users specified in the Bcc: field will get the email and see the addresses in the to: and cc: fields.

  (c) Blind Computer Communication: The users specified in the Bcc: field will get the email but it will be an audio file because this is how blind people get email.

  (d) Blind Carbon Copy: The users specified in the Bcc: field will get the email but will not see the addresses in the to: and cc: fields.

  (e) Blind Computer Communication: The users specified in the Bcc: field will get the email but will not see the addresses in the to: and cc: fields.

Question 18
[2.5 marks] What does the SMTP protocol do?

    (a) SMTP is the Simple Mail Transfer Protocol. It contacts the DNS Server to find the address of the mail server and sends the email message to the destination mail server.
    (b) SMTP is the Simple Mail Transfer Protocol, where email is kept on the server and the email client just shows what messages are on the server and downloads them on demand.
    (c) SMTP is the Simple Mail Termination Protocol, where the computer decides which email is SPAM and deletes it.
    (d) SMTP is the Simple Mail Termination Protocol, where the server decides which email is SPAM and deletes it.
    (e) SMTP is the Simple Mail Transfer Protocol, where email is downloaded from the server to the local computer and deleted from the server after download.

Question 19
[2.5 marks] Which of the following statements is TRUE?

    (a) Synchronous communication requires both participants to be on the same computer at the same time, while asynchronous communication does not.
    (b) Asynchronous communication requires both participants to be on the same computer at the same time, while synchronous communication does not.
    (c) Asynchronous communication requires both participants to be communicating at the same time, while synchronous communication does not.
    (d) Email is an example of synchronous communication.
    (e) Synchronous communication requires both participants to be communicating at the same time, while asynchronous communication does not.

Question 20
[2.5 marks] One of the advantages of Wikipedia is that …

    (a) the management is done by male geeks.
    (b) there are many possibilities of vandalism.
    (c) there is no direct quality control.
    (d) it is quick to develop material.
    (e) the content is not stable.

Question 21
[2.5 marks] Which of the following statements is FALSE?

    (a) Some wikis accept HTML markup.
    (b) Different wiki systems use different markup.
    (c) The markup language used for wikis was developed by Ed Roberts.
    (d) Wikis use their own markup language.
    (e) The software that Wikipedia uses is called MediaWiki.

Question 22
[2.5 marks] Which of the following statements is FALSE?

    (a) Blogs can be of different forms such as photoblogs, videoblogs and audioblogs.
    (b) Blog posts are displayed in reverse chronological order.
    (c) A blogger is a person that posts entries to a blog.
    (d) It is estimated that there are less than 100 million blogs worldwide.
    (e) A blog consists of entries called posts.

Question 23
[2.5 marks] In 1989, Tim Berners-Lee created …

    (a) the WWW project at Silvaco.
    (b) the WWW project at CERN.
    (c) the WWW project at IBM.
    (d) the Xandadu project.
    (e) the first computer hypertext system.

Question 24
[2.5 marks] Which of the following statements is TRUE?

    (a) HTTP stands for 'Hypertext Transit Protocol'.
    (b) HTTP is a domain name.
    (c) FTP is another name for HTTP.
    (d) HTTP stands for 'Hypertext Transfer Protocol'.
    (e) URL stands for 'Universal Resource Location'.

Question 25
[2.5 marks] What is a Web Server?

    (a) A hypermedia document designed for the WWW.
    (b) Software that tracks Internet activity.
    (c) A collection of Web pages related to a single topic or theme.
    (d) A computer system used to spy on the WWW.
    (e) A computer system that processes requests via HTTP.

Question 26

[2.5 marks] What is WolframAlpha?

    (a) A computational knowledge engine.
    (b) A knowledge-based programming language.
    (c) A cheap method of voice communication.
    (d) A collection of online books.
    (e) A Peer-to-Peer network.

Question 27

[2.5 marks] Which of the following is FALSE?

A potential concern with the rapid technological changes in society is that …

    (a) unemployment is rising in some sectors.
    (b) some people may lack real human contact.
    (c) children may be spending too much time online.
    (d) WWW content may become addictive.
    (e) people become more productive as they have less distractions from the outside world.

Question 28

[2.5 marks] Which of the following is allowed by the Copyright (New Technologies) Amendment Act 2008 No 27?

    (a) Format shifting.
    (b) Encrypted space shifting.
    (c) Delay shifting.
    (d) Transport copying.
    (e) Transparent copying.

Question 29

[2.5 marks] Which of the following statements regarding the 2008 study of computer game use in Hamilton, New Zealand is TRUE?

    (a) 16% of the children in the study said they have 'sometimes' played restricted video games.
    (b) An 8-year-old boy wrote that R18 was 'all good as long as I don't play at night'.
    (c) More than half the children in the study said they 'always' played restricted video games.
    (d) 7 out of 10 children in the study said they have played restricted video games.
    (e) There was a low recognition rate of the censor's red age-related R18 label.

Question 30
[2.5 marks] What is one disadvantage of storing files 'in the cloud'?

    (a) Collaboration is streamlined.
    (b) There is automatic backup.
    (c) Files are accessible from any connected device.
    (d) Files are accessible anywhere in the world.
    (e) Only the secondary memory is synced.

Question 31
[2.5 marks] Which of the following statements about ASCII is FALSE?

    (a) ASCII is a code used to represent English characters as numbers.
    (b) There are ASCII codes for $0 - 9$.
    (c) ASCII uses 128 ASCII characters.
    (d) ASCII stands for 'American Standard Code for Internet Interchange'.
    (e) There are ASCII codes for $A - Z$.

Question 32
[2.5 marks] Which of the following statements is FALSE?

    (a) PS was created in 1984.
    (b) PS tells the printer how and where to display text.
    (c) PS stands for 'PrintScript'.
    (d) Apple produced the first PS printer.
    (e) PS is a programming language.

Question 33
[2.5 marks] What is RefWorks?

    (a) An online text editor used for programming languages like Python.
    (b) A web-based bibliographic management system.
    (c) A web-based operating system.
    (d) A web-based word processing management system.
    (e) An online GUI system for LaTeX.

Question 34
[2.5 marks] What is one advantage of RefWorks?

    (a) Storage is limited when the service is free.
    (b) It is impossible to collaborate on group work.
    (c) It is possible to use it only within the University.
    (d) It is free.
    (e) It is impossible to create formatted bibliographies.

Question 35
[2.5 marks] Microsoft was formed by …

    (a) Paul Allen and Bill Gates in 1975.
    (b) Paul Allen and Bill Gates in 1965.
    (c) Steve Jobs in 1985.
    (d) Steve Wozniak and Steve Jobs in 1985.
    (e) Alan Turing in 1975.

Question 36
[2.5 marks] Which of the following statements is FALSE?

    (a) VisiCalc was ported to numerous platforms.
    (b) VisiCalc was the first spreadsheet application.
    (c) VisiCalc was created by Dan Bricklin and Bob Frankston.
    (d) VisiCalc was originally released for Apple II.
    (e) VisiCalc was created by Dan Bricklin and Steve Jobs.

Question 37
[2.5 marks] What was the name of the company that Steve Jobs founded after being fired from Apple in 1985?

    (a) PTeX.
    (b) NeXT.
    (c) LaTeX.
    (d) TeXT.
    (e) MiNT.

Question 38
[2.5 marks] Which of the following is NOT a mobile operating system?

    (a) LinX OS (Linux).
    (b) iOS (Apple).
    (c) Firefox OS (Mozilla).
    (d) Windows Phone (Microsoft).
    (e) Android (Google).

Question 39
[2.5 marks] Which of the following statements regarding Donald Knuth is FALSE?

    (a) He created METAFONT.
    (b) He created LaTeX.
    (c) He wrote 'The Art of Computer Programming'.
    (d) He developed TeX during the years 1978-1989.
    (e) He created TeX.

Question 40
[2.5 marks] What is the output of the following LaTeX code?
A   aB C   E

   (a) A aB C   E
   (b) A   aB C   E
   (c) A aB C E
   (d) a ab c e
   (e) A   AB C   E

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