



**The University of Fiji**



**Undergraduate Programme**  
**Department of Computer Science and Mathematics**  
**Semester 1 Year 2018**

**FINAL COURSE EXAMINATION PAPER**

**ITC100: INFORMATION TECHNOLOGY FOR  
THE WORKPLACE**

**Important Instructions to Students:**

1. Read the questions, instructions carefully and answer the questions.
2. You are allowed an **extra 10 minutes reading time** (during this time, you are not allowed to write with pen) and **180 minutes (3 Hours) to complete this paper.**
3. Silent, non-programmable calculators are allowed, but not supplied.
4. Write all your answers in the answer booklet provided. If you need extra sheets, please ask from the supervisor. Write your name, course code and student identification number in the answer booklet and in the attendance sheet.
5. **This Final Course Examination Paper is worth 100 marks contributes 50% of the total course assessments.**
6. This paper contains four (4) sections A, B, C and D. All questions are compulsory to answer. Write all your answers legibly. The marker has the right to award zero for answers that are not legible.
7. This is a **Closed Book Examination**. The University views plagiarism, cheating and dishonest practice as serious offences and if found, offenders are penalized.

**Examination Paper Content (Format):**

| <b><u>Section</u></b> | <b><u>Question</u></b> | <b><u>Content</u></b> | <b><u>Marks</u></b> | <b><u>Suggested Time</u></b> |
|-----------------------|------------------------|-----------------------|---------------------|------------------------------|
| <b>A</b>              | <b>1-30</b>            | Multiple Choice       | 30                  | 54 minutes                   |
| <b>B</b>              | <b>1-20</b>            | Matching Questions    | 20                  | 36 minutes                   |
| <b>C</b>              | <b>1-10</b>            | True/False Questions  | 10                  | 18 minutes                   |
| <b>D</b>              | <b>1-14</b>            | Open- Ended Questions | 40                  | 72 minutes                   |
|                       |                        |                       |                     |                              |
|                       |                        |                       |                     |                              |
|                       |                        |                       |                     |                              |
|                       |                        | <b>TOTAL</b>          | <b>100</b>          | <b>180 Minutes</b>           |

**SECTION A****MULTIPLE CHOICE****30 MARKS**

Write the question number and the letter which represents the **most** appropriate answer for each question in the answer booklet. Each question is worth 1 mark.

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1. A slight modification of digital content that is not noticeable when the work is viewed or played but that identifies the copyright holder is known as \_\_\_\_\_.  
a. digital patent                      b. digital trademark  
c. digital watermark                d. digital copyright
  
2. Two specific types of \_\_\_\_\_ are e-commerce systems and point-of-sale (POS) systems.  
a. order entry systems            b. accounting systems  
c. office systems                    d. document processing systems
  
3. To explain acceptable computer use to their employees, students, or other users, many organizations and educational institutions publish guidelines for behavior, often called \_\_\_\_\_.  
a. use guides                        b. social media etiquette  
c. codes of conduct                d. operations path
  
4. \_\_\_\_\_ is a consortium of researchers, educators, and technology leaders from industry, government, and the international community that is dedicated to the development of revolutionary Internet technologies.  
a. P2P                                  b. Internet2  
c. ICANN2                            d. ISP
  
5. In Microsoft Access, a field whose data type is \_\_\_\_\_ can contain any characters.  
a. Alpha                                c. Normal  
b. Text                                  d. Lookup
  
6. Sometimes it's not easy to make ethical decisions. For example, should an ISP obey with a request from a government for the identity of an customer whose e-mail account matches a(n) \_\_\_\_\_?  
a. IP address                        b. broadcast flag  
c. RAM                                  d. serial port
  
7. Artificial intelligence systems that attempt to imitate the way a human brain works are called \_\_\_\_\_.  
a. robots                                b. expert systems  
c. neural networks                  d. biometric systems

8. \_\_\_\_ refers to driving around an area with a Wi-Fi-enabled device to find a Wi-Fi network in order to access and use it without authorization.
- a. War driving
  - b. Wi-Fi driving
  - c. Wi-Fi finding
  - d. E-stalking
9. Many web pages today store small text files called \_\_\_\_ on the computer's hard drive to identify return visitors and their preferences.
- a. blogs
  - b. cookies
  - c. podcasts
  - d. filters
10. A \_\_\_\_ is designed to connect a portable computer to peripheral devices like mouse, keyboard etc more easily.
- a. notebook holder
  - b. laptop station
  - c. notebook stand
  - d. docking station
11. In an expert system, the \_\_\_\_ is a software program that applies the rules to the data stored in the knowledge base in order to reach decisions.
- a. rules processor
  - b. inference engine
  - c. data authority
  - d. knowledge bus
12. A saved database is referred to as a \_\_\_\_.
- a. file
  - b. databook
  - c. DBMS
  - d. template
13. \_\_\_\_ is an emotional health concern related to computer use.
- a. CTS
  - b. An Internet addiction
  - c. CVS
  - d. a sore or stiff neck
14. Some worms are specifically written to take advantage of newly discovered \_\_\_\_ in operating systems and e-mail programs before the security patch to correct that vulnerability is available.
- a. scripts
  - b. applets
  - c. file indexes
  - d. security holes
15. The goal of \_\_\_\_ is to ensure that every child in the world has access to a rugged, low-cost, low-power connected laptop in order to provide them with access to new channels of learning, sharing, and self-expression.
- a. OX
  - b. Simputer
  - c. OLPC
  - d. InternetWorld

16. A(n) \_\_\_\_ is a collection of elements (people, hardware, software, and data) and procedures that interact to generate information needed by the users in an organization.
- a. operating system      b. information system
  - c. device      d. utility program
17. An example of a Wi-Fi security standard is \_\_\_\_.
- a. WPA      b. SSL
  - c. WIP      d. OTP
18. \_\_\_\_ refers to any instruction delivered via the Web.
- a. E-training      b. Web-based teaching (WBT)
  - c. Distance lessons      d. Web-based training (WBT)
19. Similar to spam, \_\_\_\_ can be annoying, waste people's time, bog down e-mail systems, and clog users' inboxes.
- a. computer worms      b. Trojan horses
  - c. e-mail hoaxes      d. digital manipulation
20. Collecting in-depth information about an individual is known as \_\_\_\_.
- a. personal databasing      b. identity theft
  - c. information piracy      d. electronic profiling
21. A \_\_\_\_ protects inventions by granting exclusive rights of an invention to its inventor for a period of 20 years.
- a. trademark      b. watermark
  - c. patent      d. copyright
22. When computer systems perform in ways that would be considered intelligent if observed in human beings, it is referred to as \_\_\_\_.
- a. artificial intelligence (AI)      b. computer-aided design (CAD)
  - c. computer-aided manufacturing (CAM)      d. neural networks
23. Screen reader software is an example of a(n) \_\_\_\_.
- a. one-handed keyboard      b. head-pointing system with puff switch
  - c. voice input system      d. assistive output device
24. \_\_\_\_ is used specifically for the purpose of recording keystrokes, logging the programs or Web sites accessed, or otherwise monitoring someone's computer activity.
- a. Audio software      b. Computer monitoring software
  - c. Video software      d. Surveillance software

25. A relatively new type of very fast direct connection available to homes and businesses in areas where there is fiber-optic cabling available all the way to the building is generically called \_\_\_\_.
- a. T1
  - b. DSL
  - c. ISDN
  - d. BoF
26. When a proposal for a new system or system modification is submitted, one of the first steps is to conduct a \_\_\_\_.
- a. preliminary design
  - b. preliminary investigation
  - c. preliminary acquisition
  - d. preliminary implementation
27. To keep a desktop computer or a server powered up when the electricity goes off in addition to protecting against power fluctuations, a(n) \_\_\_\_, which contains a built-in battery, can be used.
- a. UPS
  - b. surge suppressor
  - c. voltage controller
  - d. voltage meter
28. When a digitally signed document is received, the recipient's device uses the sender's \_\_\_\_ key to verify the digital signature.
- a. private
  - b. organizational
  - c. public
  - d. token
29. \_\_\_\_ refers to the use of computers to help manage manufacturing operations and control the machinery used in those processes.
- a. Computer-aided manufacturing (CAM)
  - b. Computer-aided design (CAD)
  - c. Enterprise architecture
  - d. Product lifecycle management (PLM)
30. Using the \_\_\_\_ browsing mode offered by some browsers can prevent personal information from being left on a public computer.
- a. firewall
  - b. anonymous
  - c. private
  - d. industrial

**SECTION B****MATCHING****20 MARKS**

Match the descriptions (1-20) with the terms from Table 1. Write the description numbers and match the correct terms in the answer booklet. For example (1- Transistors). Each question is worth 1 mark.

**Table 1: List of Terms**

|                      |                      |             |
|----------------------|----------------------|-------------|
| Transistor           | Quick access toolbar | Clipboard   |
| Storage Area Network | Ethernet (802.3)     | DOS Attack  |
| Freeware             | Enter                | Spyware     |
| Volatile             | Shareware            | TCP/IP      |
| Datasheet view       | Expansion slots      | Mesh        |
| RAID                 | Grooves              | OCR         |
| Disk Cache           | Network Area Storage | BUS         |
| OMRs                 | ESC                  | Nonvolatile |
| Motherboard          | Digital Cash         | Sectors     |

**Descriptions**

1. A smart card can store a prepaid amount of \_\_\_\_\_, which can be used for purchases at a smart card-enabled vending machine.
2. To avoid confusion with the term tracks, which is used to refer to songs on an audio CD, the track on an optical disc is sometimes referred to as a(n) \_\_\_\_\_.
3. \_\_\_\_\_ is a networking protocol that uses packet switching to facilitate the transmission of messages; the protocol used with the Internet.
4. A(n) \_\_\_\_\_ stores copies of data or programs that are located on the hard drive and that might be needed soon in memory in order to avoid having to retrieve the data or programs from the hard drive when they are requested.
5. Storage media are \_\_\_\_\_, meaning that the data remains on the media even when the power to the computer or storage device is off.
6. A(n) \_\_\_\_\_ provides storage for a network, but it consists of a separate network of hard drives or other storage devices, which is connected to the main network.
7. \_\_\_\_\_ is a network in which there are multiple connections between the devices on the network so that messages can take any of several possible paths.
8. \_\_\_\_\_ is the most widely used wired LAN networking standard.

9. In \_\_\_\_\_, the table is represented as a collection of rows and columns called a datasheet when using Microsoft Access.
10. To end a slide show presentation when using Microsoft Powerpoint 2007, \_\_\_\_\_ button has to be pressed on the keyboard.
11. When using Microsoft Excel 2007, \_\_\_\_\_ which is located by default above the ribbon provides easy access to frequently used commands.
12. To enter a blank line into a document, press the \_\_\_\_\_ key without typing any text on the line.
13. To copy or move text, you use the \_\_\_\_\_, a special memory location that temporarily holds sections of your document.
14. \_\_\_\_\_ are locations on the motherboard into which expansion cards can be inserted to connect those cards to the motherboard.
15. \_\_\_\_\_ is a method of storing data on two or more hard drives that work together.
16. The key element of the microprocessor is the \_\_\_\_\_ which is a device made of semiconductor material that controls the flow of electrons inside a chip.
17. \_\_\_\_\_ input data from special forms to score or tally exams, questionnaires, ballots, and so forth.
18. \_\_\_\_\_ programs are software programs that are given away by the author for others to use free of charge.
19. \_\_\_\_\_ is a software program installed without the user's knowledge that secretly collects information and sends it to an outside party via the user's Internet connection.
20. \_\_\_\_\_, is an act of sabotage that attempts to flood a network server or Web server with so many requests for action that it shuts down or simply can no longer handle requests, causing legitimate users to be denied service.

**SECTION C****TRUE / FALSE****10 MARKS**

Write either true or false for each question from this section in the answer booklet. Each question is worth 1 mark.

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- 1) An example of two-factor authentication is using a password that is two characters long. \_\_\_\_\_
- 2) A throw-away e-mail can help to reduce spam. \_\_\_\_\_
- 3) A non-management worker would most likely use a decision support system. \_\_\_\_\_
- 4) Submitting a copy of a poem from a website as your own work for a poetry class assignment is regarded as plagiarism. \_\_\_\_\_
- 5) The formula =A3+B3 located in cell C3 would add the two cells to the left of cell C3. \_\_\_\_\_
- 6) A disaster recovery plan can help a business get operational again following a fire, an act of sabotage, or a similar disaster. \_\_\_\_\_
- 7) Using a computer keyboard can cause carpal tunnel syndrome. \_\_\_\_\_
- 8) An example of typosquatting would be to register the domain name microsfst.com to profit from it. \_\_\_\_\_
- 9) In most cases, servers run 20 hours a day, with 4 hours set aside to let the servers cool down. \_\_\_\_\_
- 10) Users are only involved in the system development life cycle if the end-user approach is being used. \_\_\_\_\_

**SECTION D****OPEN - ENDED****40 MARKS**

Answer ALL the questions from this section in the answer booklet provided.

- 1) For the path given below, answer question 1(a -c):

H:\ITC100 Lab Assessment 1\Lab grp 5\Watisoni\_A1.docx

- Name of the file (including its file extension). **(1 mark)**
  - Which drive the document is located on? **(1 mark)**
  - Is the document stored inside a folder? If so then give the folder name(s). **(1mark)**
- 2) Explain the difference between relative cell references absolute cell references. **(2 marks)**
- 3) Find the decimal number represented by the binary number 00010011. **(2 marks)**
- 4) Despite being such a small island nation, Fiji has seen a fair share of technological advancements. The recently introduced E-Transport cards that serves as an electronic payment mechanism for travelling in the bus is an application of near field communications (NFC) standards. Discuss NFCs in light with its usage in Fiji, focusing on its advantages and disadvantages. **(3 marks)**
- 5) Explain the steps involved in creating the table of contents in Microsoft Word 2007 using the reference tab. **(2 marks)**
- 6) Define open source software and why whether open source software will have an overall positive or negative impact on the quality of software? **(2 marks)**

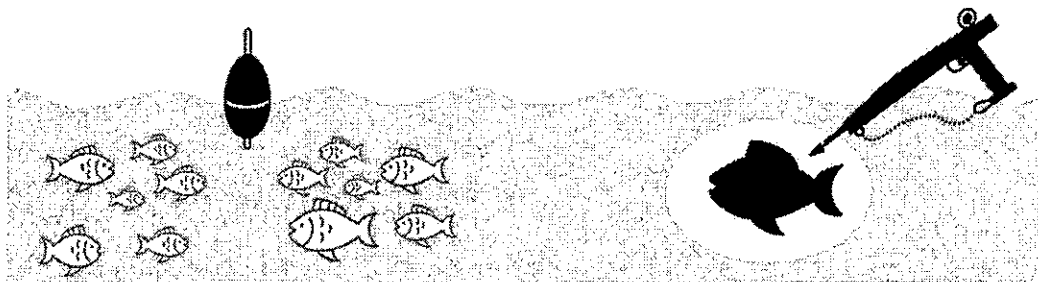


Figure 1: Phishing versus spear- phishing attacks

(Source: <http://blog.nasafcu.com/2016/11/phishing-spear-phishing-yet-different/>)

- 7) Internet scams are becoming a common practise and many users are becoming victims to it. Figure 1 shows the difference between two such scams. With help of figure 1 discuss and explain the differences between phishing and spear phishing scams. **(2 marks)**

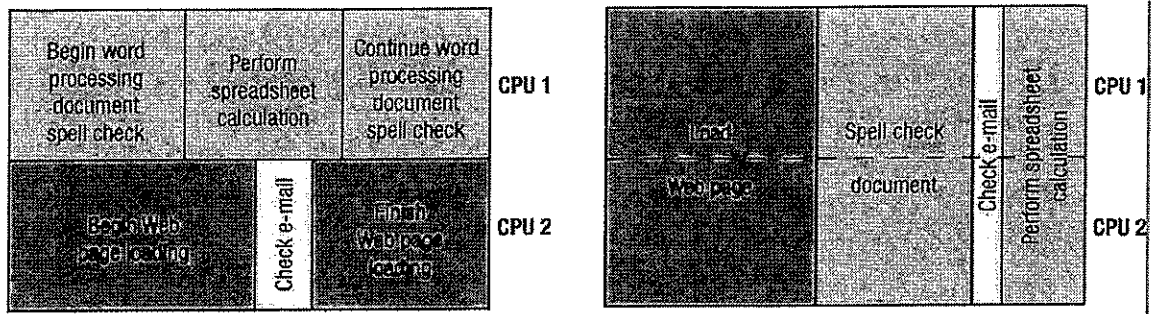


Figure 2: Comparison between Multiprocessing & Parallel Processing  
(Source: Understanding Computers: Today & Tomorrow by Morley & Parker, 16 Ed., 2017, Page 183)

- 8) Using figure 2 above, explain multiprocessing and parallel processing. (2 marks)
- 9) What are the advantages and disadvantages of cloud storage? (2 marks)
- 10) A machine cycle is the process of carrying out a single piece of microcode by the microprocessor. It takes four steps to complete one machine cycle. Discuss the four steps. (2 marks)
- 11) Draw a clear and neat diagram of a computer network showing a server, client computers and a network switch. Label all components. (3 marks)
- 12) There seems to be lot more interference with wireless communication devices now than in the past, mainly because many of these devices operate using unlicensed radio frequencies. One example listed in the reference text book was of British air traffic control transmissions being interrupted by transmissions from nearby baby monitors. A devices such small as baby monitors could pause important communication leading to aircraft collision or further problems. Who is at fault here? Who should be responsible for fixing this problem? Is it the people who buy multiple products that use the same radio frequency, or the manufacturers who haven't ensuring that their products be able to switch channels as needed to use a free channel or the government for allowing unregulated airwaves? (5 marks)
- 13) Everyday objects such as cars, ovens roller coaster rides etc, are now being computerized. There are many benefits of this. Are there any risks? Would you feel comfortable riding on a roller coaster that was computer controlled? Why? Do the benefits of computerizing an increasing number of everyday objects outweigh the potential risks? Why or why not? (5 marks)
- 14) A lot of information is available online these days. Are all websites online giving useful information or are there websites whose content can be harmful? If a website instructs people on how to perform an illegal act, is the creator of the websites criminally liable? Is there anyone responsible for preventing such harmful information from being shared online? Who? Does the government have the right or obligation to censor any Internet content? If so, what? (5 marks)

*End of Exam*