



Undergraduate Programme
Department of Computer Science and Mathematics
Semester 2 Year 2019

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 Theory Paper is worth 100 marks contributes 50% of the total course assessments.**
6. This paper contains three (3) sections A, B and C. All questions are compulsory to answer.
7. Write all your answers legibly. The marker has the right to award zero for answers that are not legible.
8. 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):

<u>Section</u>	<u>Question</u>	<u>Content</u>	<u>Marks</u>	<u>Suggested Time</u>
A	1-30	Multiple Choice Questions	30	50 minutes
B	1-10	True and False Questions	10	15 minutes
C	1-21	Open- Ended Questions	60	115 minutes
		TOTAL	100	180 Minutes

Write the question number and the letter which represents the **most** appropriate answer for each question in the answer booklet.

1. RAM can be thought of as the ____ for the computer's processor.
 - a. factory
 - b. operating room
 - c. waiting room
 - d. planning room
2. Dimeisavu has taken a job in the IT services department of UniFiji. Her boss has put her on a special assignment to see where scanners can be used more effectively within the school. The librarian Sherlyn asked her if there is a way to scan printed pages and to have the image be an editable word-processing document. Dimeisavu explains that through the use of ____ software, this is possible.
 - a. character interpretation
 - b. character translation
 - c. character transformation
 - d. character recognition
3. Rules for exchanging data between computers are called _____.
 - a. programs
 - b. procedures
 - c. protocols
 - d. hyperlinks
4. A network ____ sends data only to the devices specified as the destination.
 - a. switch
 - b. port
 - c. hub
 - d. keylogger
5. ____ is a conceptual blueprint that defines the structure and operations of an enterprise (a business, organization, government agency, or other entity).
 - a. Business intelligence
 - b. System architecture
 - c. Business flowchart
 - d. Enterprise architecture
6. A fraudulent or deceptive act or operation designed to trick individuals into spending their time and money for little or no return is called a _____.
 - a. annoyance
 - b. attack
 - c. worm
 - d. scam
7. Many of today's microprocessors perform ____, in which multiple instructions are executed at the same time.
 - a. serial processing
 - b. multitasking
 - c. parallel processing
 - d. benchmarking
8. Most operating systems have security features available, such as an option to automatically download and install ____ from the operating system's manufacturer on a regular basis.
 - a. security walls
 - b. security patches
 - c. device patches
 - d. device drivers

9. ____ is the process of gathering, storing, accessing, and analyzing data about a company in order to make better business decisions.
- a. Business intelligence
 - b. System architecture
 - c. Business flowchart
 - d. Enterprise architecture
10. Files that are broken into small parts and stored wherever space is available are said to be ____.
- a. Compressed.
 - b. Lost.
 - c. Uninstalled.
 - d. Fragmented.
11. Tui wants to backup his important file. However he doesn't have the slightest clue as to where he should keep his backups. His younger sister Maria tells him the most secure storage location is ____.
- a. close to the computer containing the original data
 - b. in the computer room where it can easily be found
 - c. in a different location
 - d. none of the above
12. Spreadsheets are particularly useful for ____.
- a. what-if analysis
 - b. use as a calculator
 - c. creating tables
 - d. none of the above
13. A ____ is a malicious-logic program that hides within or looks like a legitimate program and usually is triggered by a certain condition or action.
- a. computer virus
 - b. worm
 - c. Trojan horse
 - d. all of the above
14. A ____ is a sudden increase or spike in electrical energy, affecting the current that flows to electrical outlets.
- a. brownout
 - b. UPS
 - c. power surge
 - d. battery blast
15. A one-line description, used to present the topic of an e-mail message, is referred to as the ____.
- a. header
 - b. subject
 - c. address
 - d. signature
16. Each character added to a password significantly ____ it might take for someone or for a hacker's computer to guess the password.
- a. reduces the number of combinations and the length of time
 - b. reduces the number of combinations but increases the length of time
 - c. increases the number of combinations but reduces the length of time
 - d. increases the number of combinations and the length of time
17. The three main types of intellectual property rights are copyrights, trademarks, and ____.
- a. warranties
 - b. patents
 - c. wills
 - d. cyber rights

18. The ____ takes instructions from the prefetch unit and translates them into a form that the control unit can understand.
- register
 - decode unit
 - ALU
 - internal cache
19. Time bombs are most likely planted in an information system by ____.
- advertisers
 - spammers
 - disgruntled computer programmers
 - customers who have read-only access
20. IBF Consultants, LLC provides consulting services in privacy and theft deterrence solutions. Zion, one of their clients has very sensitive data and they are less concerned about recovering any stolen computer than ensuring that the data located on the computer is not compromised. Which of the following technologies would be useful in this case?
- kill switch hard drives
 - surge suppressors
 - DataDots
 - keylogging software
21. Which of the following is NOT an advantage of using a wired network?
- Increased security
 - Fast access
 - Simple to configure
 - Limited mobility
22. To avoid security threats, a user can ____.
- store all data on a thumb drive
 - enable the Hide extensions
 - read email as soon as it comes in
 - avoid opening suspicious email attachments
23. To select a column in Microsoft Excel the easiest method is to ____.
- double-click any cell in the column
 - drag from the top cell in the column to the last cell in the column
 - click the column heading
 - click the column label
24. A teacher sharing a poem with a class, leading the class to believe the poem was his original work constitutes ____.
- bad manners
 - plagiarism
 - trademark theft
 - patent infringement
25. In its simplest form, a(n) ____ is a programmed formula that the recipient of encrypted data uses to decrypt the ciphertext.
- encryption key
 - virus signature
 - digital certificate
 - session cookie
26. Copyrights apply to both published and unpublished works and remain in effect until ____.
- 10 years after the creation of the work
 - 70 years after the creation of the work
 - 10 years after the creator's death
 - 70 years after the creator's death

27. ____ refers to the ability of one computing device on a network (such as the Internet) to locate and identify another device on the same network and determine its status.
- a. Presence technology
 - b. Computer monitoring
 - c. Digital surveillance
 - d. Detection technology
28. An emotional health concern related to computer use is ____.
- a. CTS
 - b. CVS
 - c. addiction to the Internet or another technology
 - d. sore or stiff neck
29. ____ devices are designed to withstand much more physical abuse than conventional devices.
- a. Secured
 - b. Ruggedized
 - c. Malleable
 - d. Flexible
30. For online shopping, signing up for free offers, discussion groups, product registration, and other activities that typically lead to junk e-mail, use a disposable or ____.
- a. junkie e-mail address
 - b. throw-away e-mail address
 - c. one-use e-mail address
 - d. second-hand e-mail address

Read each question carefully and write either **TRUE** or **FALSE** in the answer booklet.

- 1) In the binary number system, 2 is used to represent the value 2.
- 2) A thin red border indicates the active cell in MS Excel.
- 3) A window user interface provides a way to point and click a mouse to select menu options and manipulate graphical objects displayed on the screen.
- 4) In Datasheet view, a table is represented as a collection of rows and columns called a datasheet.
- 5) RAM is volatile, which means it must constantly receive electric power to hold data.
- 6) A keyboard is an example of a pointing device.
- 7) Storage mass is the maximum amount of data that can be stored on a storage medium.
- 8) Every Web page has a unique address called a Uniform Resource Locator.
- 9) Speech recognition refers to the ability of machines to understand the spoken word.
- 10) Part of the microprocessor that fetches instructions and performs logical arithmetic operations is ALU.

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

- 1) Using examples compare and contrast between relative and absolute cell referencing when using Microsoft Excel 2007 **(2 marks)**
- 2) Describe the advantages and disadvantages of magnetic storage, optical storage, and solid state storage using criteria such as flexibility, durability, capacity, access time, and transfer rate. **(3 marks)**
- 3) Robotics is a field of study concerned with developing and using robots. Name and explain the three types of robotics and how it's being utilized in society today. **(3 marks)**
- 4) RFID tags are used in a number of products, including passports all over the world. What are RFID tags, why is there an increasing use in this technology? Discuss its advantages and disadvantages **(3 marks)**
- 5) Differentiate between storage and memory. **(2 marks)**
- 6) There are various processing techniques utilized by operating system to increase efficiency and increase the amount of processing at a given amount of time. Discuss three such techniques, namely, Multithreading, multiprocessing and parallel processing. **(6 marks)**
- 7) Convert the following binary numbers into decimal numbers: Show all steps. **(2 marks)**
 - a) 00110111
 - b) 1110001
- 8) Explain some of the reason and ways people and businesses use the Internet. **(2 marks)**
- 9) Name and discuss 2 applications found in windows 7, 8 or 10 accessories. **(2 marks)**
- 10) What is TCP/IP and how does it work? Use packet switching in your answer. **(2 marks)**
- 11) Assume, that a 1GB is 1000MB. You have a 500GB hard drive with the following content:

ITEM	SPACE USED
Windows 7	60GB
Movies	107GB
Pictures	1803MB
Documents	125MB

How much storage is currently being used and how much is left? Show your calculations. **(2 marks)**

- 12) A network can be arranged or configured in several different ways called topology. Discuss star network topology. Also give its advantages and disadvantages. **(2 marks)**
- 13) Bar codes are machine-readable codes that represent data as a set of bars. Compare and contrast UPC and QR bar codes. **(2 marks)**
- 14) For the file path given below, identify the drive the document is located on, the name of the file (including its file extension), and whether or not the document is stored inside a folder. If the file is stored inside one or more folders, list the folder name(s). **(3 marks)**
E:\Sem2\ITC100\Lab Assessment 2\Marking Rubric.docx
- 15) Why should you be concerned about computer security? **(2 marks)**
- 16) Compare and contrast twisted pair, coaxial cable and fibre optic cables. **(3 marks)**
- 17) Describe the characteristics of PANs and LANS. **(2 marks)**
- 18) Compare and contrast WiMax hotzone and Wi-Fi hotspots. **(2 marks)**
- 19) Each technological improvement has pros and cons. Select a technology you use every day and discuss its benefits and risks. What benefit does the technology provide? Are there any risks involved and if so, how can they be minimized. If you choose not to use this technology because of the possible risks associated with it, how would your life be affected? Suppose if the benefits of any technology outweigh its potential risks, what should the government do about it? Write your answer in an essay format of about 300 words **(5 marks)**
- 20) While Facebook (FB) is seen as the most popular social media site, many question its usefulness. Do you want to know the routine activities your friends are doing during the day? Why? Is it useful information to tweet that your bus is stuck in traffic or that you are having a bad day? Why? Do you follow anyone on FB? Why or why not? Do you think using FB on the job does not take up enough time to be a concern, but what about the distraction factor? Should employers allow employee to use social sites like FB and other popular online activities during work hours? Why or why not? Write your answer in an essay format of about 300 words **(5 marks)**
- 21) In addition to being used with computers and consumer products, there are also processors and other components designed to be implanted inside human beings, such as VeriChip, camera pills, RFID tags, pacemakers, brain-to-computer interfacing (BCI) etc. What does each of these implantable chips do? Are the benefits worth the risk? Are there any privacy concerns? What's your opinion about these? Do you consider using any of these? Why? Discuss all the above in an essay format of about 300 words. **(5 marks)**

End of Exam