



Undergraduate Programme
Department of Computer Science And Mathematics
Semester 2 Year 2018

FINAL COURSE EXAMINATION PAPER

**ITC 100 – INFORMATION TECHNOLOGY FOR
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 a 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 the supervisor. Write your name, course code and student identification number in the answer booklet and on 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.
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	54 Minutes
B	1-20	True / False Questions	20	36 Minutes
C	1-20	Matching Questions	20	36 Minutes
D	1-14	Open Ended Questions	30	54 Minutes
		TOTAL	100	180 Minutes

SECTION A: Multiple Choice Questions**[30 Marks]**

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

1. A _____ is a programmable, electronic device that accepts data input, performs processing operations on that data, and outputs and stores the result.
 - a. hardware
 - b. software
 - c. computer
 - d. processor
2. The _____ is regarded as the largest and most well-known computer network, linking billions of devices all over the world.
 - a. network
 - b. WiFi
 - c. internet
 - d. CPU
3. The instructions, also called computer programs, that are used to tell a computer what it should do.
 - a. Uniform Resource Locator
 - b. Tablet computer
 - c. Processor
 - d. Software
4. The term _____ is used to provide a temporary location for the computer to hold data and program instructions while they are needed.
 - a. RAM (random access memory)
 - b. ROM (read only memory)
 - c. hard disk drive
 - d. external drive
5. The _____ is the main circuit board of a computing device, located inside the system unit, to which all computer system components connect.
 - a. CPU
 - b. Motherboard
 - c. Control unit
 - d. ASCII
6. A universal bus used to connect up to 127 peripheral devices to a computer without requiring the use of additional expansion cards.
 - a. USB
 - b. CPU
 - c. PCI
 - d. PCIe
7. A _____ is a named place on a storage medium into which the user can place files in order to keep the files stored on that medium organized.
 - a. File
 - b. Folder
 - c. cloud storage
 - d. hard drive
8. The primary storage system for most computers; used to store most programs and data used with that computer.
 - a. Hard drive
 - b. Solid state drive
 - c. external hard drive
 - d. optical disc

9. The term _____ refers to a storage method that uses several hard drives working together, typically to increase performance and/or fault tolerance.
- a. RAID
 - b. Disk cache
 - c. storage area network
 - d. flash memory card
10. _____ a common pointing device that the user slides along a flat surface to move a pointer around the screen and clicks its buttons to make selections.
- a. Smart glass
 - b. Touch screen
 - c. scanner
 - d. mouse
11. A device containing a tiny chip and a radio antenna that is attached to an object so it can be identified using radio frequency identification technology.
- a. Smart tag
 - b. Key tag
 - c. digital tag
 - d. RFID tag
12. A _____ is a display device that is touched with the finger to issue commands or otherwise provide input to the connected device.
- a. Smart glass
 - b. LCD screen
 - c. touch screen
 - d. LED screen
13. _____ is a Linux-based operating system designed for mobile devices and developed by the Open Hand Alliance, which is a group of companies led by Google.
- a. OSX
 - b. UNIX
 - c. Android
 - d. iOS
14. A type of software that performs a specific task, usually related to managing or maintaining a computer system.
- a. Utility program
 - b. Windows
 - c. Kernal
 - d. Linux
15. _____ is regarded as the main component of system software that enables a computer to operate, manage its activities and the resources under its control, run application programs, and interface with the user.
- a. Utility program
 - b. Windows
 - c. Kernal
 - d. Operating system
16. An agreement, either included in a software package or displayed on the screen when the software is installed or launched, that specifies the conditions under which the program can be used.
- a. Copyright
 - b. Intellectual property rights
 - c. Software license
 - d. Domain

17. A single category of data to be stored in a database, such as a person's name or phone number; also called a column.
- a. Field
 - b. Record
 - c. Row
 - d. Database
18. Copyrighted software that is distributed on the honour system; consumers should either pay for it or uninstall it after the trial period.
- a. Freeware
 - b. Shareware
 - c. Trial Version Software
 - d. Software license
19. A collection of computers and other hardware devices that are connected together to share hardware, software, and data, as well as to communicate electronically with one another.
- a. Computer network
 - b. TCP/IP
 - c. Ethernet
 - d. WirelessHD
20. A networking standard for very short-range wireless connections; the devices are automatically connected once they get within the allowable range.
- a. Antenna
 - b. Switch
 - c. GPS
 - d. Bluetooth
21. The term _____ describes a network in which there are multiple connections between devices on the network so that messages can take any of several paths.
- a. Digital signal
 - b. Ethernet
 - c. Mesh network
 - d. Computer Network
22. _____ is a learning environment in which the student is physically located away from the instructor and other students; commonly, instruction and communications take place via the Web.
- a. Distance Learning
 - b. E-communication
 - c. Podcast
 - d. Remote Learning
23. A type of Internet connection in which the computer or other device must dial up and connect to a service provider's computer via telephone lines before being connected to the Internet.
- a. Internet
 - b. Dial-up connection
 - c. Broadband Over Fiber
 - d. WiFi hotspot through phones
24. The collection of social networking sites and other communications channels used to transmit or share information with a broad audience.
- a. Search Engine
 - b. Facebook
 - c. Podcast
 - d. Social Media

25. _____ is a software program installed without the user's knowledge and designed to alter the way a computer operates or to cause harm to the computer system.
- a. Denial of Service (DoS) Attack
 - b. Computer virus
 - c. dot con
 - d. Phishing
26. The use of spoofed electronic communications (typically e-mail messages) to obtain credit card numbers and other personal data to be used for fraudulent purposes.
- a. Phishing
 - b. Firewall
 - c. Hacking
 - d. Identity Theft
27. _____ is an information system that combines geographic information with other types of data (such as information about customers, sales, and so forth) in order to provide a better understanding of the relationships among the data.
- a. Transaction processing system (TPS)
 - b. Management Information System (MIS)
 - c. Neural Network
 - d. Geographic Information System (GIS)
28. The process consisting of the six phases of system development: preliminary investigation, system analysis, system design, system acquisition, system implementation, and system maintenance.
- a. System Development Life Cycle (SDLC)
 - b. Software Development Life Cycle (SDLC)
 - c. Management Information System (MIS)
 - d. Software Detail Life Cycle (SDLC)
29. A form of protection for an invention that can be granted by the government; gives exclusive rights of an invention to its inventor for 20 years is known as _____.
- a. Copyright
 - b. Trademark
 - c. Patent
 - d. Intellectual Property Rights
30. The legal right to sell, publish, or distribute an original artistic or literary work; it is held by the creator of a work as soon as it exists in physical form.
- a. Copyright
 - b. Trademark
 - c. Patent
 - d. Intellectual Property Rights

SECTION B: True and False Questions**[20 Marks]**

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

1. A computer can run without an operating system if it has good application software.
2. Software includes all the physical parts of a computer.
3. A storage medium that can hold 256 GB can hold about 256 billion characters.
4. The amount of data that can be transferred over a bus in a given time period determines the bus's volatility.
5. A computer system with a C drive and a D drive must have two physical hard drives.
6. A hybrid hard drive contains both magnetic hard disks and optical discs.
7. Near Field Communication (NFC) is most commonly used for electronic payments.
8. A keyboard is an example of a pointing device.
9. Mobile devices, such as smartphones and tablets, do not require an operating system.
10. Windows 10 is an example of an operating system.
11. The formula = D4 + E4 located in F4 would multiply the two cells to the left of F4.
12. In a word processing document, the Enter key is always pressed at the end of each screen line to move down to the next line.
13. The type of cable used inside most homes for telephone service is twisted-pair wire.
14. The Internet is an example of a LAN.
15. On the Internet, an access provider and a content provider are essentially the same things.
16. A Wi-Fi hotspot is used to provide Internet access to individuals via a wireless connection.
17. Electronic profiling is the act of using electronic means to collect a variety of in-depth information about an individual, such as name, address, income, and buying habits.

18. Cyberstalking is the use of spoofed e-mail messages to gain credit card numbers and other personal data to be used for fraudulent purposes.
19. Users are only involved in the system development life cycle if the end-user approach is being used.
20. Assistive technology is hardware and software designed to help all beginning computer users learn how to use a computer.

SECTION C: Matching Questions

[20 Marks]

Match the descriptions (1-20) with the terms from the below table. Write the description numbers and match the correct terms in the answer booklet. Each question in this section is worth 1 mark.

List of Terms		
iOS	Hardware	Open Source
Terascale Computing	Insertion Point	Multiprocessing
Software	Input Device	Network
Volatile	Bus	Flash Memory
Ergonomics	Dual Mode	Plagiarism
Biometric	Virtualization	Copyright
Hyperlink	Linux	E-Commerce
Output Device	War Driving	Android
Systems Analyst	Portable Scanner	Handwriting Recognition
Online Auction	Mesh Network	Hacking

1. _____ is frequently used with servers today to create several environments on a single server that function as separate servers.
2. Text or an image on a Web page that is clicked to access additional Web resources is called a(n) _____.
3. Multi-core CPU's allow _____ in which the CPU is able to work on multiple jobs at one time.
4. The ability of a computer to process data at teraflop speeds is referred to as _____.
5. Storage media are not _____ meaning they do not lose their contents when the power is shut off.
6. Secure Digital (SD) cards are one type of _____ medium.

7. With _____ software, pen-based computers can convert handwritten text into editable, typed text.
8. A(n) _____ can be used to convert flat printed documents, such as a drawing or photograph, into digital form.
9. _____ is an open-source operating system that is available without charge over the Internet.
10. _____ is the operating system used with iPhones and iPads.
11. With a(n) _____ program, the source code for the program is made available to the public and so it can be legally modified by others.
12. The blinking vertical line displayed on the screen that indicates the current location in a document, such as where the next change will be made to the document in a word processing program, is called the _____.
13. With a(n) _____ network topology, all devices are connected in a line to a central cable.
14. A(n) _____ phone can be used with more than one communication network, such as when used with both a cellular and Wi-Fi network.
15. Performing financial transactions over the Internet is called _____.
16. With a(n) _____, people bid on products over the Internet, and the highest bidder purchases the item.
17. Driving around looking for Wi-Fi network to access is referred to as _____.
18. _____ access control systems use some type of unique physical characteristic of a person to authenticate that individual.
19. A(n) _____ is the computer professional who is most involved in the system development process.
20. Turning in a copy of a poem you found on a Web site as your original composition for a poetry class assignment is an example of _____.

SECTION D: Open Ended Questions**[30 Marks]**

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

1. If a computer manufacturer called Apex created a home page for the Web, what would its URL likely be? Also, supply an appropriate e-mail address for yourself, assuming that you are employed by the company. **[1 Mark]**

2. For the following binary numbers, calculate the appropriate decimal number: **[2 Marks]**
 - a. 11001100
 - b. 10010010

3. Assume, for simplicity's sake, that a kilobyte is 1,000 bytes, a megabyte is 1,000,000 bytes, and a gigabyte is 1,000,000,000 bytes. You have a 250-gigabyte hard drive with the following content:

ITEM	STORAGE SPACE USED
Operating System	15 GB
Other Software	1,350 MB
Digital Photos and Videos	50 GB
Other Documents	85 MB

How much storage space is currently being used? How much is left? Show all appropriate calculations. **[2 Marks]**

4. List two advantages of RFID technology over barcode technology. **[1 Mark]**

5. For the following path, 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).

D:\User\Desktop\Personal\Resume.docx **[1 Mark]**

6. For a customer database containing 50 customers and recording data about the customer's number, last name, street, city, state, ZIP code, and current balance, answer the following questions:
 - a. How many records are in the database?
 - b. How many fields are in the database?
 - c. To display a list of all customers who live in Texas and have a current balance of less than \$15, what database tool should be used?**[1.5 Marks]**

7. Explain the difference between Wi-Fi and Bluetooth, including speed, range, and the purpose of each networking standard. **[1 Mark]**

8. Explain the difference between a blog, a wiki, and a podcast. **[1.5 Marks]**

9. List two precautions you can take to protect against someone hacking your social media accounts.
[1 Mark]
10. Explain the difference between a Request for Proposal (RFP) and a Request for Quotation (RFQ).
[1 Mark]
11. List three possible negative physical effects that can result from computer use and describe one way to lessen each effect.
[2 Marks]
12. There is usually a positive side and a negative side to each new technological improvement. Select a technology you use every day and consider its benefits and risks. What benefits does the technology provide? Are there any risks involved and, if so, how can they be minimized? If you chose not to use this technology because of the possible risks associated with it, how would your life be affected? Who should determine if the benefits of a new technology outweigh the potential risks? Consumers? The government?
[5 Marks]
13. People send their digital photos over the Internet in different ways. For instance, digital photos are often e-mailed to others, posted on Facebook pages and other social networking sites, and uploaded to a server (such as one belonging to Snapfish, Dropbox, and so on) in order to order prints, enlargements, or other photo-based items. If you have ever sent photos over the Internet, were you concerned about someone other than the intended recipient intercepting or viewing your photo files? If you have ever uploaded files to a processing service for printing, did you check to see if the Web server being used was secure? Should individuals be concerned about sending their personal photos over the Internet? There are a number of advantages, but are there privacy risks, as well?
[5 Marks]
14. Twittering became virtually an overnight sensation, but some question its usefulness. Do you want to know the routine activities your friends (or other individuals you choose to follow) are doing during the day? Is it useful information to tweet that your bus is stuck in traffic or that you are having a bad day? Do you follow anyone on Twitter or do you tweet regularly? Why or why not? Because twitter updates have to be very short, some may think that twittering on the job does not take up enough time to be a concern, but what about the distraction factor? Should employers allow employees to use Twitter, Facebook, and other popular online activities during work hours? Why or why not?
[5 Marks]

THE END