



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2019/2020**

COURSE NAME : INTRODUCTION TO INFORMATION TECHNOLOGY  
COURSE CODE : BIT 10203  
PROGRAMME CODE : BIT  
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **EIGHT (8)** PAGES

**SECTION A****Instruction:** State whether each of the following statement is **TRUE** or **FALSE**.

- Q1**
- (a) The following list are in increasing order (slowest to fastest): megahertz, kilohertz, gigahertz.
  - (b) RAM is volatile; the hard disk is non-volatile. Data access in RAM is faster than on the hard disk.
  - (c) Information System is a collection of people, procedures, software, hardware and data.
  - (d) Data is information that has been processed in some way.
  - (e) Information is simply data that have a particular meaning within a specific context.
  - (f) A gigabyte (GB or Gig) is roughly 1 trillion bytes.
  - (g) A database is a collection of information that you organize and access according to the logical structure of that information.
  - (h) A combination of multiple Database Management Systems (DBMSs) may provide data for a Decision Support System (DSS).
  - (i) An LAN is a local network, usually operating in the different building or on the different campus.
  - (j) In a star topology network, data packets travel around in one direction.
  - (k) Telecommuters are authorized to have access to their companies Intranet.
  - (l) Internet Explorer and Google Chrome are examples of web browser.
  - (m) Green computing involves reducing the electricity and environmental waste while using a computer.

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- (n) Hub is a small hardware device that joins multiple computers together within one local area network (LAN).
- (o) A simplex communication system is a point-to-point system composed of two connected parties or devices that can communicate with one another in both directions, simultaneously.
- (p) Worms consists of making repeated requests of a computer system or network, thereby overloading it and denying legitimate users access to it.
- (q) Decryption is the process of altering readable data into unreadable form to prevent unauthorized access.
- (r) A special computer that directs communicating messages when several networks are connected together.
- (s) Computer communications is a process in which two or more computers or devices transfer data, instructions, and information.
- (t) A network is a system of interconnected computers, telephones or other communication devices that can communicate with one another and share applications and data.
- (u) Octal number system contains digits from 0 – 7.
- (v) Online processing allows more than one instruction to be processed at a time by breaking down a problem into smaller parts and processing them simultaneously with multiple processors.
- (w) Cache, memory, hard drive is in incorrect order of the highest to the lowest capacity (size).
- (x) 1GiB consist of  $2^{30}$  Bytes.
- (y) UNICODE represents the largest set of characters.

(25 marks)

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**SECTION B**

**Instruction:** Choose the **BEST** answer for each of the following questions.

- Q2** (a) In information technology processed form of data is called:
- A. data processing
  - B. system
  - C. information
  - D. instruction
- (b) Devices that accepts data from outside computer and transfer into CPU are called:
- A. input devices
  - B. digital devices
  - C. analogue devices
  - D. truth table peripherals
- (c) Specification which has little effect on speed of a processor is
- A. cache
  - B. system bus speed
  - C. clock speed
  - D. socket type
- (d) Computer memory which allows simultaneous read and write operations is
- A. ROM
  - B. RAM
  - C. EPROM
  - D. EEPROM
- (e) System which processes data instructions without any delay is classified as
- A. real time system
  - B. online system
  - C. offline system
  - D. instruction system
- (f) 1 Byte is
- A. 8 bits
  - B. 4 bits
  - C. 2 bits
  - D. 16 bits

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- (g) Which of the following is **NOT** an industry standard tool for scheduling and project management?
- A. Gantt Chart.
  - B. Data Flow Diagram (DFD).
  - C. Work Breakdown Structure (WBS).
  - D. All the above.
- (h) Which of the following is **NOT** the output of Management Information System?
- A. Error reports.
  - B. Summary reports.
  - C. Demand reports.
  - D. Annual reports.
- (i) “The end users were asked to totally stop using the old system and shift to the new system”. This statement refers to \_\_\_\_\_.
- A. phased implementation
  - B. direct implementation
  - C. parallel implementation
  - D. pilot implementation
- (j) An expert system is **NOT** capable of the following:
- A. Refining their own knowledge.
  - B. Producing accurate output for inadequate knowledge base.
  - C. Substituting human decision makers.
  - D. All the above.
- (k) Which of the following is a responsibility of communication protocols?
- A. Checking for transmission errors.
  - B. Acknowledging receipt of transmitted data.
  - C. Dividing messages into packets.
  - D. All the above.

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- (l) The responsibility of the World Wide Web Consortium (W3C) includes the following.
- A. Oversees research, sets standards and guidelines of the Internet.
  - B. Controls the Internet.
  - C. Creates new top-level domain.
  - D. Protects the Internet from cybercrimes.
- (m) Mahmood is a student at University of Tun Hussein Onn Malaysia (UTHM). He wants to communicate with his parents in Turkey via email. Which type of network is involved in the communication?
- A. Local Area Network (LAN)
  - B. Metropolitan Area Network (MAN)
  - C. Wide Area Network (WAN)
  - D. Home Area Network (HAN)
- (n) A software tools that was designed to support activities of system development cycle is known as:
- A. Data flow diagram (DFD)
  - B. Use case diagram
  - C. computer-aided software engineering (CASE)
  - D. Waterfall diagram
- (o) Malware can be spread by the following was:
- A. By infected floppies, external disk or CDs
  - B. By opening unknown email attachments
  - C. Through infiltrated Wi-Fi hot spots and by clicking on infiltrated websites
  - D. All the above

(15 marks)

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**SECTION C**

**Instruction:** Answer **ALL** questions.

- Q3** (a) Differentiate between data, information, and knowledge. (6 marks)
- (b) Modem is short form for modulate and demodulate. Describe the **TWO (2)** terms. (4 marks)
- (c) Explain **FIVE (5)** advantages of Local Area Network (LAN) compared to standalone computers. (10 marks)
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- Q4** (a) FSKTM is in the process to implement a new attendance system for their students.
- (i) Name **THREE (3)** major stakeholders for the project. (3 marks)
- (ii) State an established methodology to ensure the project is successful. (1 mark)
- (iii) Apply the methodology in **Q42(a)(ii)** for the project and discuss **ALL** the phases needed, each with specific action. (12 marks)
- (b) Contrast and compare between transaction processing systems, management information systems, decision support systems and expert systems. Provide **ONE (1)** major characteristic for each of the system category. (4 marks)

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**Q5** (a) Based on Figure **Q5(a)** answer the following questions.

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| 1. <a href="https://www.msu.com.my/info">https://www.msu.com.my/info</a> |
| 2. <a href="mailto:g.nes@msu.com.my">g.nes@msu.com.my</a>                |

**FIGURE Q5(a)**

- (i) State the domain name of those addresses. (1 mark)
- (ii) Define both addresses. (2 marks)
- (iii) What is the top-level domain of both addresses, and which entity does it represent? (2 marks)
- (iv) Discuss **ONE (1)** reason on why a domain name should be translated into its corresponding Internet Protocol (IP) address prior to packet routing. (2 marks)
- (v) Who manages the domain names to ensure they are unique? (1 mark)
- (b) Differentiate between analog signal and digital signal. (6 marks)
- (c) Illustrate a network design for a small office with the following requirements. (6 marks)
- Six computers
  - One printer
  - Internet connection for all computers

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- END OF QUESTIONS -