

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

Faculty of Industrial Technology

Department of Industrial and Manufacturing Engineering

COMPUTER APPLICATIONS - TIE 2109

1ST SEMESTER EXAMINATION APRIL 2009

Instructions To Candidates

- 1.Examination length is **3hrs**.
- 2.Each question carries twenty (**20**) marks and there are six (**6**) questions in total.
- 3.Attempt the whole of Section A and any other three questions from Section B.

Section A

Question 1

- a) Why is spreadsheet software so useful in the engineering profession? [4]
- b) Explain the following database terms:
entity; attribute; record; domain. [4]
- c) Suppose you have access to the database of a public listed company that sells computer accessories. What output would you expect from these queries?
 - i) SELECT FirstName, LastName
FROM Investors
WHERE Country = "China"; [3]
 - ii) SELECT ProductName,
UnitPrice*UnitsInStock AS TotalValue
FROM Products; [3]
 - iii) SELECT Products.ProductName,
Categories.CategoryName
FROM Categories, Products
WHERE
Categories.CategoryID = Products.CategoryID; [3]
 - iv) SELECT OrderID, Sum ([UnitPrice]*[Quantity]*(1-[Discount]))
AS Subtotal
FROM [Order Details]
WHERE OrderID=1651; [3]

Question 2

- a) Define the following:
CPU, RAM, ROM, SRAM, DRAM, CD-ROM, DVD, LAN, WWW, HTTP. [10]
- b) Distinguish between system software and application software. [4]
- c) State any four high – level programming languages. [4]
- d) Deduce the decimal number represented by this byte:
10001010 [2]

Section B

Question 3

- a) Describe how you would create an electronic slide show presentation that includes music. [5]
- b) Write a brief but concise discussion on GUI. [5]
- c) The Web is so vast that it is useless unless one can easily locate relevant resources. Explain the current solution to this problem. [10]

Question 4

- a) Define the following:
computer virus; worm; malware; firewall. [12]
- b) Discuss how you would protect your computer from malware. [8]

Question 5

- a) Write short notes on e-commerce. [10]
- b) Write a brief but concise discussion on the World Wide Web with specific reference to the relevant terminology. [10]

Question 6

- a) Draw a diagram showing how a CPU processes instructions. [8]
- b) What is an operating system? [4]
- c) Discuss the functions of an operating system. [8]

End of examination