



الجامعة العربية المفتوحة
Arab Open University

ARAB OPEN UNIVERSITY
FACULTY OF COMPUTER STUDIES
INFORMATION TECHNOLOGY AND COMPUTING
T171: YOU, YOUR COMPUTER AND THE NET
PART 1

Fall 2006/2007

FINAL EXAM
(Form B)

IMPORTANT:

- 1) This exam has 4 parts with a total of 75 questions.
- 2) The exam paper consists of **10** pages including this page.
- 3) Exam duration is 150 minutes.
- 4) Write your student ID, your name and section number in the cover sheet and only your student ID in the Answer Sheet.
- 5) Fill in your answers in the Answer Sheet. No paper will be graded if the answer sheet is not filled.
- 6) All questions have equal weight (same credit).

معلومات هامة:

- (1) هذا الامتحان مكون من 75 سؤال موزعة على اربعة اجزاء.
- (2) عدد صفحات الامتحان 10 من ضمنها هذه الصفحة.
- (3) مدة الامتحان 150 دقيقة.
- (4) يجب كتابة الرقم الجامعي والاسم ورقم المجموعة على الصفحة الاولى و الرقم الجامعي فقط على صفحة الإجابة.
- (5) املأ الإجابات على صفحة الإجابة، ولن يصحح الامتحان ما لم تملأ صفحة الإجابة.
- (6) جميع الأسئلة متساوية في تقسيم العلامات.

PART 1

Answer the following 20 multiple-choice questions and fill your answers in the first table of the Answers Sheets.

1. It's faster for the CPU to communicate with the RAM than any other storage chip because
 - a. the RAM Stores all the data the computer is currently using
 - b. the RAM consists of chips similar in construction to the CPU
 - c. the contents of RAM are often lost when the computer is switched off
 - d. the RAM contains Not altered data

2. The concept of a microprocessor, which meant that instead of designing a separate IC for each application, we could have one general purpose IC that can be programmed, has been introduced by
 - a. Ted Hoff
 - b. Alan Turing
 - c. John Mauchly
 - d. Charles Babbage

3. The difference between the mainframe and the PC:
 - a. Mainframe operated by specialist only but the PC can be operated by anyone.
 - b. Customer-supplier relationship is long-termed in the main frame but sort-term in the PC.
 - c. Mainframe had customized software while the PC utilizes commonly available software.
 - d. All of the above

4. CP/M operating system (Control Program for Microcomputers) was portable, in that it could be run on different types of computer by:
 - a. Making CP/M text based operating system
 - b. Isolating BIOS from other parts of the operating system
 - c. Dividing CP/M into 3 major modules
 - d. Non of the above

5. The protocol that used to transfer files between computers is called
 - a. SMTP
 - b. HTTP
 - c. NNTP
 - d. FTP

6. Bill Gates and Paul Allen highlight many trends for Microsoft and the PC industry in general, some of them are:
 - a. Taking an existing product and adapting it to make their own.
 - b. Both a and d are correct
 - c. Good programmers are not good businessmen
 - d. Taking products from the Mainframe industry to the PC

7. The equivalent value for the decimal number $(255)_{10}$ in binary $(?)_2$ is
 - a. 10000001
 - b. 11111111
 - c. 100000000
 - d. 11111101

8. Which one of the following is **not** true about IBU:
 - a. The leader of IBU was Bill Lowe
 - b. The objective of IBU is to produce an IBM microcomputer (PC) within a year.
 - c. Compaq constructed IBU to work outside usual framework
 - d. IBU method became a widely used method in PC industry

9. Technological superiority, Legacy, Market leader, Society acceptance and Marketing are some reasons:
- for the success of a product
 - help IBM to make the turnaround
 - caused IBM to lose market
 - Non of the above
10. Apple uses _____ chip microprocessors in their computers.
- Intel
 - Phoenix
 - IBM
 - Motorola
11. Which one is not correct about PageMaker
- The product that had influenced greatly Macintosh and pushed it in the Market
 - Desktop publishing software produced by Aldus
 - Does not Required a Graphical User Interface
 - Allowed the process of producing Newspapers and Magazines which was a time consuming process
12. Which of the following is **the least likely** to be true about the Microsoft company in the PC industry:
- It bundled products owned by other companies and distributed them with its products
 - It set the standards in many applications.
 - It adapted many products and made it its own.
 - Its products are used in a great percentage of PCs.
13. An example for an open industry standard:
- Lisa
 - Deskpro 386
 - Macintosh
 - IMac
14. Windows 3.0 was released in 1990 and was a great success. Some of the reasons for the success:
- There were many software packages running on windows 3.0 available shortly
 - It has legacy while OS/2 hasn't
 - It was compatible with earlier software running on Dos.
 - All of the above
15. In analog communication, a physical connection has to be established between the communicating points (sender and receiver). This process is called:
- circuit switching
 - decentralization
 - packet Switching.
 - time-sharing platform
16. The first packet switching network using ___IMPS was built in October 1969.
- 5
 - 4
 - 3
 - 2
17. The correct order for the following operating systems starting with the **latest one**:
- Windows, OS/2, Ms DOS, CP/M
 - Windows, Ms DOS, CP/M, OS/2
 - Windows, Ms DOS, OS/2, CP/M
 - OS/2, Windows, Ms DOS, CP/M

18. The Designer for (Analytical Engine, Turing Machine, EDVAC) in the same order
 - a. Charles Babbage, Alan Turing, John Von Neumann
 - b. John Von Neumann, Alan Turing, Charles Babbage
 - c. Charles Babbage, John Von Neumann, Alan Turing
 - d. Alan Turing, John Von Neumann, Charles Babbage

19. The surprising success of reverse engineering caused _____ to lose the market
 - a. Compaq
 - b. IBM
 - c. Intel
 - d. Aldus

20. One of the following is **not** a benefit obtained by connecting a set of computers together in a **network**:
 - a. Sharing resources
 - b. Communications
 - c. File Access
 - d. Use graphical user interface (GUI) programs

PART 2

Answer the following 20 True/False questions and fill your answers (T or F) in the second table of the Answers Sheets.

21. Network Working Group (NWG) created a Network Control Protocol (NCP) which enabled different hosts on the network to communicate.
22. Generally, computer companies have their own personalities formed by the personalities of their founders.
23. 2048 K Byte is equivalent to 2 M Byte
24. In the Flat Management structure there are many levels separating the boss from the actual workers.
25. The first mobile phones were mainly analogue, but there has now been a general shift over to 'digital' phones.
26. A resolution of 1024 X 768 refers to 1024 pixels across and 768 pixels down
27. One of the main additional features of a network operating system(NOS) that the system needs to be able to allow several users to access the computer's resources at the same time, this is know as multi-tasking.
28. To overcome ENIAC (Electronic Numerical Integrator and Computer) limitations, EDVAC (Electronic Discrete Variable Automatic Computers) had been designed by John Von Neumann in 1944.
29. When Intel came up with its 80286 microprocessor, Compaq released its Deskpro 286 PC. This PC can compete with the PC-AT released by IBM. PC-AT was more reliable, faster and cheaper than Deskpro 286 PC.

30. Pascal, Basic & C++ are all examples for application software.
31. Page Maker is a desktop publishing software that has been developed by the Digital Research Company.
32. AND, OR, IF, THEN and ELSE are all Arithmetic operations.
33. The first company succeed in reverse engineering process to the IBM PC was Compaq.
34. There is no central control of the Internet.
35. Apple II plus was the first PC to be produced in a big scale in a period of only 2 months and It Released in 1977.
36. Empowerment simply means giving power to someone
37. Since 1973, three quarters of the network traffic was Usenet news.
38. Open architecture meant that the components made up the machine were bought from other suppliers and their design was available for anyone else to use.
39. Lawrence Robert from MIT manage ARPA's networking project. Robert's view of the network topology was simple: Every node is connected to all other nodes over dial up telephone lines
40. The main factor that made Microsoft as big as it is today is the agreement between IBM and Bill Gates to supply the PC with an operating system called MS-DOS that was almost identical to CP/M.

PART 3

Answer the next 20 fill-in space questions by selecting the most appropriate word from the following table and then filling the word number in the third table of the answers sheets.

(1) Packets	(2) bootstrap	(3) IBM	(4) Intellectual creativity	(5) Standard
(6) Computer	(7) Reverse engineering	(8) Domain Name Server (DNS)	(9) Ethernet	(10) Commoditization
(11) Moore's Law	(12) GUI	(13) Star network	(14) Assembly language	(15) Transport
(16) Workstations	(17) metaphor	(18) millennium Bug	(19) World Wide Web (WWW)	(20) OS/2

41. _____ is an electronic machine that accept information (input) and process it according to specific instructions (programs) then stores raw and processed information or provides results as new information (output).
42. _____ Use a special chip as RISC (Reduced Instruction Set Computing).
43. The language that is normally used to program the microprocessor is _____, which corresponds to machine code and thus, it is a very low level language.

44. As an example for _____, the first integrated circuit contained two transistors while a current Pentium III processor contains 9.5 million transistors.
45. The first thing the computer needs to be able to do is to load its own operating system, so that it can function. It does this by using a small program which is in read-only memory (ROM) called _____.
46. _____ is one of the Characteristics of the new PC companies which mean that Employees were encouraged to work on projects they found interesting, and to be creative, often to the detriment of the products in the market.
47. A computer network that has a central computer (most probably a mainframe) that controls the network and called a hub. This type of network is called _____.
48. When a collision occurs in a LAN (Local Area Network), the _____ detects such a collision and makes the two nodes wait for a random time (each a different time-usually measured in milliseconds) and resend the data.
49. HP monitors and IBM system unit work together when we just plug in the monitor to the system unit, this is because HP and IBM agreed on the same _____.
50. _____ Was founded in 1924 by Tom Watson.
51. Many companies succeed in extracting IBM BIOS functionally by using _____.
52. _____ is the process where a product becomes no longer associated with any one manufacturer and is viewed as just the product.
53. Apple decided to use _____ concept in its new PCs to achieve its philosophy: "Make computer accessible to every one and make it very easy to use".
54. The Lisa computer used the key to the GUI that was a new expression _____ which is the desktop.
55. Microsoft and IBM took on a joint development project to develop _____, a new GUI operating system which would be owned by IBM.
56. Many programs written in the 70s and 80s used two digits instead of 4 digits when referring to years. For example, instead of writing 1975, they wrote 75, this is known as _____.
57. IP addresses translated into words by a computer known as _____. It makes it easier for human
58. _____ was invented in Geneva in 1989.
59. In packet switched network, the sender's message is transferred by first breaking it into equal size pieces called _____.
60. In the protocol, the _____ layer is responsible for breaking messages into packet and routing messages.

PART 4

Answer the next 15 essay questions by writing short answers (not more than two lines) in the corresponding question number in the answer sheet. Do not exceed the specified space for the answer in the Answer sheets.

Part 4 Essay questions	
Question	Answer
61.	<p>Mention 3 major ideas that have been invented by Xerox PARC during their rule in developing computer technology.</p> <ol style="list-style-type: none"> 1- Laser printers 2- GUI graphical user interface 3- management structure
62.	<p>There are many differences between IBM and Microsoft, Mention 2.</p> <ol style="list-style-type: none"> 1- # Customers 2- customer relations 3- 4-
63.	<p>Define the "IBM clones".</p> <p>Identical machines to IBM</p>
64.	<p>Define Legacy problem.</p> <p>History relevant to a certain product was to be considered</p> <p>مثال: (IBM) في 1980s</p>
65.	<p>Define SMTP.</p> <p>Simple Mail Transfer Protocol</p>
66.	<p>Specify 2 main features that differentiates a network operating system from a regular one.</p> <ol style="list-style-type: none"> 1- multi user 2- compatibility 3- software security
67.	<p>Define systems thinking.</p> <p>Thinking holistically looking on the world as a whole rather than individually</p>

68.	<p>What are the advantages of using IMPs in network?</p> <p>1- Freeing the host of overload. 2- the routing programs are the same → communication will be easier</p>
69.	<p>Define the term word size. the size of word a microprocessor can manipulate at a time.</p>
70.	<p>What is the RFCs? Request for Comments technical note written by... to exchange ideas for designing the network.</p>
71.	<p>What is the IP? Internet protocol - which is consist of 4 numbers separated by dots.</p>
72.	<p>The difference between the data buses and the address buses. This one carries the data And the address in the memory</p>
73.	<p>Mention 3 factors that affect the computer power. 1- Micro processor 2- word size 3- clock speed 4- ram.</p>
74.	<p>What do we mean by bitmapping? Pixels in a row no network</p>
75.	<p>What is ARPANET? The first network ever which is 4 nodes connected by telephone line</p>

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PART 1
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(Form B)

Answers Sheet

The exam will not be marked unless this page is filled

لن يصحح الامتحان ما لم تملأ هذه الصفحة

Student ID:	Section Number:
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Part 1	
<i>Multiple-choice</i>	
Question	Answer
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Part 2	
<i>True/False</i>	
Question	Answer
21.	
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Part 3	
<i>Fill-in blanks</i>	
Question	Answer
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SEMESTER GRADE = (NUMBER OF CORRECT ANSWERS / 3) =

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