

NED UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI
FIRST YEAR (COMPUTER SCIENCE AND INFORMATION TECHNOLOGY)
EXAMINATION 2007
BATCH 2006-07

Time: 3 Hours

Dated: 31-10-2007
Max. Marks: 80

FUNDAMENTALS OF INFORMATION TECHNOLOGY
(CT-158)

Instructions: 1. Attempt any **FIVE** questions.
2. All questions carry equal marks.

- Q. 1) (a) Describe each of the four generations of computers (4)
(b) Describe primary and secondary storage devices (4)
(c) Discuss D-RAM and S-RAM (2)
(d) What are the uses of a modem? (3)
(e) Describe the standard keyboard layout (3)
- Q. 2) (a) What is Flash memory? (2)
(b) Define L1 Cache, L2 Cache & L3 Cache (3)
(c) How are nanotechnologies used today? (3)
(d) Why do computers need ROM? (4)
(e) What is a network topology? Describe the different network topologies, giving advantages and disadvantages of each. (4)
- Q. 3) (a) What is data communications? (2)
(b) What are the most important benefits of networking? (4)
(c) Describe the structure of a packet (4)
(d) Describe a client server and peer to peer network (2)
(e) Describe shielded twisted pair cable, unshielded twisted pair cable, coaxial cable and fiber optic cable. (4)
- Q. 4) (a) Describe standard and digital telephone lines (5)
(b) Describe what a router, bridge and gateway are. (6)
(c) Describe input devices including the keyboard, devices for the hand, optical input devices and audio visual (multimedia) input devices. (5)
- Q. 5) (a) Describe CRT monitors and Flat Panel Display monitors. (8)
(b) Convert the following: (8)
(i) 235 Decimal to Binary
(ii) $(10111)_2$ Binary to Decimal
(iii) 121.361 Decimal Point to Binary
(iv) $(1010.0011)_2$ Binary Point to Decimal
(v) 001101100111 Binary code decimal to Decimal

- Q. 6) (a) What is a Graphical User Interface (GUI)? (2)
(b) Discuss GUI Tools, Applications and their Interface, menus, Dialog Boxes and Command-Line Interfaces. (10)
(c) Discuss multitasking. How does the operating system manage hardware? (4)

Q. 7) Discuss ONE of the following topics of your choice:

Recent advances in IT, IT systems, Development of the modern computer, Introduction to Software, Data structures, Coding, Programming and problem solving algorithms, Data types and representation, Basic organisation of the computer, Number systems, Data communication, Database, I.S. and MIS.

(16)

- Q. 8) (a) Write the period of the second generation of computers (1)
(b) Discuss the different categories of hardware of a computer (4)
(c) Discuss Wireless communications and Wide Area Networks. (4)
(d) What are the different components of a computer system? (4)
(e) Convert the following Decimal Point into Binary: 121.361 (3)