

Subject Code—950

$$950 = \frac{1}{4}$$

M.C.A. (First Year) EXAMINATION

(5 Years Integrated Course)

MCA-101

COMPUTER FUNDAMENTAL

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) Explain the methods to represent characters and fractions in computers.
- (b) Why is Hexadecimal representation used in computers and explain a method to convert a binary number into decimal.
2. (a) Explain any two input devices.
- (b) How data is stored on CDROM and floppy disk ? Compare the advantages of one over the other.

P.T.O.

3. (a) Explain 2's complement and 1's complement methods.
- (b) Convert $(61)_{10}$ and $(14)_{10}$ to binary number systems and perform the operations of addition, subtraction, multiplication and division.
4. (a) Differentiate between compiler, interpreter, assembler and translator.
- (b) Explain the following commands of Unix :
- (i) Pwd
 - (ii) mkdir
 - (iii) ls
 - (iv) cat
 - (v) chmod
 - (vi) cp.
5. (a) What is the difference between unit shell and shell script ? Explain the characteristics of shell
- (b) Differentiate between time sharing and multiprogramming. How are they related with spooling ?

Q50 = 3/4

6. (a) Explain the various generations of computers along with characteristics of each.
- (b) Explain the following :
- (i) Supercomputer
 - (ii) Main frame
 - (iii) Minicomputer
 - (iv) Work station
 - (v) Microcomputer.
7. Explain the following terms in relation to internet :
- (a) FTP
 - (b) HTML
 - (c) WWW
 - (d) IP address
 - (e) URL
 - (f) TCP/IP
 - (g) Intranet
 - (h) Firewall.

8. Write notes on the following :

(a) LAN

(b) ATM networks

(c) Distributed Computer Systems

(d) Functions of O.S.