

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

SECOND YEAR

B.A./B.SC. FOURTH SEMESTER (January – June), 2012

Mid-Semester Examination, March 2012

Date : 19/03/2012

COMPUTER SCIENCE (Honours)

Time : 2 pm – 4 pm

Paper : IV

Full Marks : 50

Answer any five questions :

1. a) What do you mean by country domain and generic domain?
b) What is URL?
c) Consider following URL :
<http://www.vidyamandira.ac.in>
Explain clearly the meaning of different parts of it.
d) What is ftp? [3+2+3+2]
2. a) What is IP address?
b) Consider following IP :
192.168.1.5
Identify its class. State corresponding net_id. Determine maximum number of hosts which can be attached in this net.
c) What is limitation of classfull addressing?
d) What is MIME? [2+4+2+2]
3. a) Consider following IP within a block of addresses.
205.16.37.39/28
Find first address, last address and blocksize.
b) Consider a binary string 1001101. Find corresponding parity bits following Hamming Code.
c) Consider 4 channels combined with TDM. Data rate of each channel is 250 character per second. If interleaving is done characterwise and an extra bit is required within each frame for synchronization then find frame duration, bit rate of the multiplexed channel. (Assume that each character is of 8 bit length). [4+4+2]
4. a) What is AMI?
b) Discuss advantages of ring topology over bus topology.
c) What is Shanon's result?
d) What is S:N ratio?
e) What is OSI model? [5×2]
5. a) What is the difference between zone and Domain?
b) What is TELNET?
c) What do you mean by FQDN and PQDN?
d) What is anonymus ftp?
e) What are different types of transmission media? [5×2]
6. a) What do you mean by transmission mode?
b) Match the following cases with proper type of methods :
Cable TV transmission → Multiplexing Method
Recording voice in a DVD → Encoding Method
Radio transmission → Casting Method.

- c) Draw a constellation diagram of 16 points with 4 different amplitudes. [3+3+4]
7. a) Draw timing diagram of MOV A, M. (Make necessary assumptions)
- b) Write a program in 8085 to divide two 8 bit numbers.
- c) Explain the “CALL” instruction with proper example. [4+4+2]

