Nepal College of Information Technology

**Unit Test**

Fall 2012

Program : BE Time : 2 hrs

Semester : (VII) FM : 70

Subject : Computer Networks PM : 35

* *Candidates are requested to give their answer as far as practicable in their own words.*
* *The figure in the margin indicates the full marks*
* ***Attempt ALL question***

1. “*Interconnection of independent autonomous machines is making our life more better*”. Justify this statement with a suitable example. [10]

2. Discuss various topologies of a Computer Network with a suitable example. When to choose what topology? [10]

3. “*Japanese Scientist cannot communicate directly with French Scientist*”. Justify this statement and provide the solution in order to make their communication possible via protocol hierarchy. [10]

4. Discuss the role of standardization in communication system. Differentiate defacto and dejurie protocols with a suitable example. [10]

5. Discuss the Seven Layers of OSI Reference Model with a suitable diagram. Also provide comparison with TCP/IP [15]

6. The Existing Network of Nepal College of Information Technology (192.168.1.0/24) is to be subnetted into four different departments

Computer Department 25 Hosts

Humanities Department 27 Hosts

ELX. and Communication Department 20 Hosts

Management Department 30 Hosts

Provide the Network Address, Broadcast Address, Usable host pool, Subnet Mask and Wildcard Mask for each department. Also provide the solution if 20 Hosts of ELX. And Communication Department need to be divided into two Sub Divisions (Electronics and Communication). [15]

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