**NAGARJUNA COLLEGE OF INFORMATION TECHNOLOGY**

**Full Marks: 60**

**Pass Marks: 30**

**Time: 3 hrs.**

**Shankhamul -09, Lalitpur**

**SET - A**

**Pre-Board Exam 2080**

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| **BIM / Fourth Semester / IT 240: Business Data Communication and Networking** |

***Candidates are required to give answer in their own words.***

**Group A**

**Brief Answer Questions (10 × 1=10)**

1. What is the purpose of data communication standard?
2. What are the different types of application architecture?
3. What is the significance of twisting in twisted pair cable?
4. Define burst error.
5. Define subnetting.
6. What are the basic components of wireless LAN?
7. Why hub is called non intelligent device?
8. Define networking.
9. What is internet?
10. What are the three major steps in current network design?

**Group B**

**Short Answer Questions (Any *Five*) (5 × 3=15)**

1. What skill does a network manager need?
2. Contrast cable modem and DSL.
3. How VPN works?
4. Differentiate between circuit switched and packet switched networks.
5. Differentiate between switch and router.
6. Explain Distance Vector Routing.

**Group C**

**Long Answer Questions (Any *Three*) (3 × 5=15)**

1. Explain IPv4 to IPv6 transition techniques.
2. A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is x4+x+1. What is the actual bit string transmitted?
3. Differentiate between Go-Back-N and Selective Repeat Algorithm.
4. Differentiate between IMAP and POP3.

**Group D**

**Case Analysis (2×10=20)**

1. Explain different types of multiplexing with figure. Explain different types of wired media.
2. The NCIT has to provide to 8 local ISPs from the network pool of 215.10.0.0/20. From the available pool each local ISP has to provide service to their 4 dedicated clients. Design the complete IP address plan which includes IP pool, usable IP pool and subnet mask for each network.

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**SET - B**

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**Group A**

**Brief Answer Questions (10 × 1=10)**

1. What are the advantages of reference models?
2. What are the functions of application layer?
3. What is the purpose of cladding in an optical fiber?
4. Define single bit error?
5. Define supernetting.
6. What are the basic components of wired LAN?
7. Why switch is called intelligent device?
8. Define networking.
9. What is internet?
10. What are the three major steps in current network design?

**Group B**

**Short Answer Questions (Any *FIVE*) ) (5 × 3=15)**

1. What is performance and fault management?
2. How WiMax works?
3. Differentiate between circuit switched and packet switched networks.
4. Explain different topology of network.
5. Explain Link state routing.
6. Differentiate between IPv4 and IPv6.

**Group C**

**Long Answer Questions (Any *THREE*) (3 × 5=15)**

1. Explain TCP connection establishment with figure.
2. Explain IPv4 format.
3. Differentiate between Go-Back-N and Selective Repeat Algorithm.
4. A bit stream 1101010011 is transmitted using the standard CRC method. The generator polynomial is x4+x+1. What is the actual bit string transmitted?

**Group D**

**Case Analysis (2×10=20)**

1. Differentiate between OSI and TCP/IP model. Explain different types of modulation techniques.
2. The NCIT has to provide to 8 local ISPs from the network pool of 215.10.0.0/20. From the available pool each local ISP has to provide service to their 4 dedicated clients. Design the complete IP address plan which includes IP pool, usable IP pool and subnet mask for each network.