

**BACHELOR IN COMPUTER  
APPLICATIONS****Term-End Examination****June, 2007****CS-68 : COMPUTER NETWORKS***Time : 3 hours**Maximum Marks : 75*

**Note :** Question number 1 is **compulsory**. Answer any **three** questions from the rest.

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1. (a) Explain the functions of repeaters and bridges. What are their limitations ? 5
- (b) Differentiate between Datagram packet switching and Virtual circuit switching. 4
- (c) Explain the classes of service defined for ATM. Give an example for each service class. 5
- (d) What is an internetwork ? Explain the purpose of internetworking devices used to connect different LAN segments. 5
- (e) Differentiate between the following : 4
- (i) Half duplex and Full duplex transmission
- (ii) Analog and Digital signal

- (f) Differentiate between Time Division Multiplexing and Frequency Division Multiplexing. 5
- (g) Can a device have more than one IP address ? Give reason. 2
2. (a) Explain the working of *Transparent Bridges*. Also, write any three advantages and two disadvantages of transparent bridges. 8
- (b) Draw the structure of header for Network-Node Interface (NNI) ATM Network. Explain the purpose of each field in this header. 7
3. (a) Explain the working of Routing Information Protocol (RIP). Also, explain the common problems that can occur with RIP. 7
- (b) What is meant by "domain name" ? How is a domain name translated to an equivalent IP address ? Explain with the help of an example. 6
- (c) Why is TCP reliable and UDP unreliable protocol ? 2
4. (a) Explain the various layers of TCP/IP model. Also, list the protocols used in each layer. 6
- (b) List and explain architecture and protocols of any three LAN standards. 6
- (c) What are the advantages of ISDN ? 3

5. (a) Does the efficiency of ATM using AAL depend on the size of the packet ? Explain and justify your answer. 5
- (b) What are the differences between 'Go-Back-N' and 'Selective-Repeat' sliding window protocols ? Explain using an example. 4
- (c) Write short notes on the following : 6
- (i) Remote Procedure Call
  - (ii) X-25 gateway
  - (iii) Crash Recovery

