

BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2011

CS-68 : COMPUTER NETWORKS

Time : 3 hours

Maximum Marks : 60

Note : Question No. 1 is *compulsory*. Attempt any two questions from the rest.

1. (a) In which layer of OSI model "Routers" are used ? How are routers helpful in congestion control in networks ? 5
- (b) What is the difference between a confirmed service and an unconfirmed service ? Give at least two examples of each. 4
- (c) Assume there is heavy traffic on both a Token ring and CSMA/CO LAN. On which system a station is more likely to wait longer to send a frame ? Justify your answer. 5
- (d) Compare between fibre optics, coaxial cable and UTP, when used as transmission media in LAN's. 6

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| | (e) | Explain the advantages and disadvantages of asynchronous and synchronous mode of data transmission. | 4 |
| | (f) | What is meant by channel Bandwidth ? How is it related with signal to noise ratio ? | 4 |
| | (g) | What are the advantages of using fixed size call in ATM ? | 2 |
| 2. | (a) | What are the disadvantages of circuit switching ? How does it compare with packet switching ? State which switching among them is best for telephone networks and why ? | 7 |
| | (b) | Compare the OSI model with TCP/IP model. List two features of its layers above the network / Internet layer. | 8 |
| 3. | (a) | Why is packet fragmentation needed in internet protocol ? Explain the fragmentation and reassembly process with the help of an example. | 7 |
| | (b) | Explain the disadvantages of X.25 protocol. Also, write how Frame Relay over comes these disadvantages. | 5 |
| | (c) | Differentiate between Baseband and Broadband coaxial cable. | 3 |

4. (a) Explain the working of gateways. How do gateways link hosts and LANS ? 5
- (b) What are the various IP address classes ? 5
Write the range of these classes, sharing the network and host parts.
- (c) How does Token Ring Network work ? 5
Explain it's similarities and differences with Ethernet.
5. (a) What are the different types of multiplexing methods possible for analog signals ? 4
Explain.
- (b) Why is CSMA/CD called non-deterministic protocol ? How collisions are detected in it ? Explain. 5
- (c) Differentiate between the following : 6
- (i) TCP and UDP
- (ii) RARP
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