Code :R7320503 1

III B.Tech II Semester(R07) Regular & Supplementary Examinations, April/May 2011
COMPUTER NETWORKS
(Common to Computer Science & Engineering, Information Technology, Computer Science & Systems Engineering, Electronics & Computer Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

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1. (a) Explain in detail ISO-OSI reference model.
   (b) Write short notes on interfaces, service and protocol.
2. (a) Explain the working of an ATM Switch with the help of a diagram.
   (b) What are the different reference points in ISDN? What is the function of each one?
3. (a) What is SLIP? What are the advantages and disadvantages of it?
   (b) With an example, explain the importance of Sequence numbers for the Acknowledgements.
4. (a) Discuss about the file key assumptions in case of dynamic channel allocation in LANs and WANs.
   (b) Discuss in detail the working of token bus.
5. (a) Differentiate between adaptive and non - adaptive routing algorithms.
   (b) What is optimality principle. Explain.
6. (a) What is load shedding? Explain its importance in the control of congestion.
   (b) Define jitter. Explain it.
7. Explain in detail the establishment and release of connections.
8. List and explain the different message formats for the e - mail.

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1. (a) Write any four reasons for using Layered Protocols.
   (b) Compare and Contrast OSI and TCP/IP model.
2. (a) What are advantages and disadvantages of Optical fiber as a transmission medium.
   (b) How is transmission media done in ATM networks?
3. (a) Briefly, explain about the Data Link Layer design issues.
   (b) If the bit string 0111101111101111110 is bit stuffed what is the output of the string.
4. (a) Describe the features of ALOHA protocol. Explain its merits.
   (b) Describe IEEE 802.3 CSMA/CD standard and IEEE 802.5 token ring standard.
5. (a) What are the properties of routing algorithm? Explain.
   (b) Explain in detail about the flooding.
6. (a) How the congestion is controlled dynamically? Explain.
   (b) Differentiate between flow control and congestion control.
7. (a) Explain, how addressing is used for establishing the connections.
   (b) What is the use of forbidden region? Explain.
8. For what purpose HTTP protocol is used. Explain it in detail.

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Code :R7320503 **3**

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1. (a) Give a detailed description of the Novell Netware reference model.
   (b) What are the advantages of Layered architecture.
2. (a) With a neat diagram explain ISDN system for home use.
   (b) Compare and contrast guided and unguided media.
3. (a) Explain one-bit sliding window protocol. Give the advantages and disadvantages of one-bit sliding window protocol.
   (b) Discuss the services provided by the Data link layer to the Network layer.
4. (a) Write about IEEE 802.3 standard.
   (b) Write a note on inter networking devices.
5. (a) Distinguish between flooding and selective flooding.
   (b) Explain in detail the importance of optimality principle in routing.
6. (a) Explain in detail about choke packets.
   (b) Discuss briefly about RED algorithm.
7. (a) Discuss in detail about the four protocol scenario for releasing a connection.
   (b) What is the relation between flow control and buffering? Explain.
8. (a) Briefly discuss about the architecture and services of e - mail.
   (b) Write a short notes on User Agent.

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1. (a) What are the advantages of having Layered architecture? Mention the Layers of ISO-OSI reference model.
   (b) What is Internet? Mention some of the applications of Internet.
2. (a) What is the problem with the Knock-out switch? Suggest a solution.
   (b) Discuss about the various transmission media available at the physical layer.
3. (a) Give the detailed description of PPP frame format.
   (b) Explain the following terms of the Data Link Layer.
   (i) Framing (ii) Error Control (iii) Flow Control.
4. (a) Write short notes on wireless LANS.
   (b) Briefly explain the IEEE 802.11 protocol stack.
5. Explain in detail the shortest path routing with suitable example.
6. (a) Explain in detail, how networks differ from each other.
   (b) Give brief description about concatenated virtual circuits.
7. (a) What is the main purpose of UDP protocol? Explain about its header.
   (b) Give brief description about the Remote Procedure Call.
8. (a) Write a detailed note on the role of URL in web mail.
   (b) What are cookies? Why we are using them.

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