Code No: R05321301 **R05** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
COMPUTER NETWORKS
Common to Electronics And Computer Engineering, Electronics And Control Engineering, Computer Science And Systems Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) If a binary signal is sent over a 3KHz channel whose signal to noise ratio is 20dB. What is the maximum achievable data rate?
   (b) Which switching method allows real-time data transfer? Mention the advantages of packet switching? [8+8]
2. (a) What is public key cryptography? What are the necessary conditions for public key cryptography?
   (b) Explain RSA algorithm with example? [8+8]
3. (a) What is a sliding window protocol? Where is it used? How will you determine the performance of a sliding window protocol?
   (b) A channel has a bit rate of 4 kbps and a propagation delay of 20 msec. For what range of frame sizes does stop-and-wait give an efficiency of at least 50 percent? [8+8]
4. (a) Explain the protocol scenarios for releasing a connection.
   (b) What is the relation between NSAP & TSAP? [12+4]
5. (a) Discuss about fast Ethernet cabling?
   (b) Explain various token bus control frames? [8+8]
6. (a) Explain any two applications for which flooding is preferred over Distance vector routing.
   (b) If network topology never changes, which of the routing protocols, Shortest path routing & Distance vector routing is preferred and why. [8+8]
7. (a) What is the relationship between telecommunications and data communications? Is one a subset of other? Give reasons for your answers?
   (b) What are the different goals and applications of networking? Give five reasons of how networks are a part of our lives? [8+8]
8. (a) When RARP is required. Explain how it works. What is the limitation of RARP? How BOOTP provides solution for it?
   (b) What is the difference between classful addressing and classless addressing? How classless addressing results in decrease in the table size?

(c) Give an argument why the leaky bucket algorithm should allow just one packet per tick, independent of how large the packet is. [6+5+5]

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Code No: R05321301 **R05** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
COMPUTER NETWORKS
Common to Electronics And Computer Engineering, Electronics And Control Engineering, Computer Science And Systems Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the protocol scenarios for releasing a connection.
   (b) What is the relation between NSAP & TSAP? [12+4]
2. (a) What is a sliding window protocol? Where is it used? How will you determine the performance of a sliding window protocol?
   (b) A channel has a bit rate of 4 kbps and a propagation delay of 20 msec. For what range of frame sizes does stop-and-wait give an efficiency of at least 50 percent? [8+8]
3. (a) Discuss about fast Ethernet cabling?
   (b) Explain various token bus control frames? [8+8]
4. (a) What is public key cryptography? What are the necessary conditions for public key cryptography?
   (b) Explain RSA algorithm with example? [8+8]
5. (a) When RARP is required. Explain how it works. What is the limitation of RARP? How BOOTP provides solution for it?
   (b) What is the difference between classful addressing and classless addressing? How classless addressing results in decrease in the table size?
   (c) Give an argument why the leaky bucket algorithm should allow just one packet per tick, independent of how large the packet is. [6+5+5]
6. (a) Explain any two applications for which flooding is preferred over Distance vector routing.
   (b) If network topology never changes, which of the routing protocols, Shortest path routing & Distance vector routing is preferred and why. [8+8]
7. (a) What is the relationship between telecommunications and data communications? Is one a subset of other? Give reasons for your answers?
   (b) What are the different goals and applications of networking? Give five reasons of how networks are a part of our lives? [8+8]
8. (a) If a binary signal is sent over a 3KHz channel whose signal to noise ratio is 20dB. What is the maximum achievable data rate?

(b) Which switching method allows real-time data transfer? Mention the advantages of packet switching? [8+8]

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Code No: R05321301 **R05** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
COMPUTER NETWORKS
Common to Electronics And Computer Engineering, Electronics And Control Engineering, Computer Science And Systems Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is public key cryptography? What are the necessary conditions for public key cryptography?
   (b) Explain RSA algorithm with example? [8+8]
2. (a) Explain the protocol scenarios for releasing a connection.
   (b) What is the relation between NSAP & TSAP? [12+4]
3. (a) If a binary signal is sent over a 3KHz channel whose signal to noise ratio is 20dB. What is the maximum achievable data rate?
   (b) Which switching method allows real-time data transfer? Mention the advantages of packet switching? [8+8]
4. (a) What is the relationship between telecommunications and data communications? Is one a subset of other? Give reasons for your answers?
   (b) What are the different goals and applications of networking? Give five reasons of how networks are a part of our lives? [8+8]
5. (a) Explain any two applications for which flooding is preferred over Distance vector routing.
   (b) If network topology never changes, which of the routing protocols, Shortest path routing & Distance vector routing is preferred and why. [8+8]
6. (a) What is a sliding window protocol? Where is it used? How will you determine the performance of a sliding window protocol?
   (b) A channel has a bit rate of 4 kbps and a propagation delay of 20 msec. For what range of frame sizes does stop-and-wait give an efficiency of at least 50 percent? [8+8]
7. (a) When RARP is required. Explain how it works. What is the limitation of RARP? How BOOTP provides solution for it?
   (b) What is the difference between classful addressing and classless addressing? How classless addressing results in decrease in the table size?
   (c) Give an argument why the leaky bucket algorithm should allow just one packet per tick, independent of how large the packet is. [6+5+5]
8. (a) Discuss about fast Ethernet cabling?

(b) Explain various token bus control frames? [8+8]

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Code No: R05321301 **R05** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
COMPUTER NETWORKS
Common to Electronics And Computer Engineering, Electronics And Control Engineering, Computer Science And Systems Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) When RARP is required. Explain how it works. What is the limitation of RARP? How BOOTP provides solution for it?
   (b) What is the difference between classful addressing and classless addressing? How classless addressing results in decrease in the table size?
   (c) Give an argument why the leaky bucket algorithm should allow just one packet per tick, independent of how large the packet is. [6+5+5]
2. (a) What is public key cryptography? What are the necessary conditions for public key cryptography?
   (b) Explain RSA algorithm with example? [8+8]
3. (a) If a binary signal is sent over a 3KHz channel whose signal to noise ratio is 20dB. What is the maximum achievable data rate?
   (b) Which switching method allows real-time data transfer? Mention the advantages of packet switching? [8+8]
4. (a) What is the relationship between telecommunications and data communications? Is one a subset of other? Give reasons for your answers?
   (b) What are the different goals and applications of networking? Give five reasons of how networks are a part of our lives? [8+8]
5. (a) What is a sliding window protocol? Where is it used? How will you determine the performance of a sliding window protocol?
   (b) A channel has a bit rate of 4 kbps and a propagation delay of 20 msec. For what range of frame sizes does stop-and-wait give an efficiency of at least 50 percent? [8+8]
6. (a) Explain the protocol scenarios for releasing a connection.
   (b) What is the relation between NSAP & TSAP? [12+4]
7. (a) Discuss about fast Ethernet cabling?
   (b) Explain various token bus control frames? [8+8]
8. (a) Explain any two applications for which flooding is preferred over Distance vector routing.

(b) If network topology never changes, which of the routing protocols, Shortest path routing & Distance vector routing is preferred and why. [8+8]

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