Code No: 07A51701 **R07** **Set No. 2**

III B.Tech I Semester Examinations,December 2011
BASICS OF TELEMATICS
Electronics And Telematics

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Compare the packetization delay for an ATM cell and for a 1500 byte packet.
   (b) What is the influence of packet size on:
      i. Line scheduling
      ii. Buffer hardware. [8+8]
2. Discuss about supervisory and metering circuits in an auto exchange. [16]
3. Write notes on the following:
   (a) Time division switch
   (b) Space division switch. [8+8]
4. (a) Explain in detail about IEEE 488 parallel interface.
   (b) Describe the following interface standards:
      i. X.29
      ii. X.26
      iii. X.27
      iv. X.20. [8+8]
5. What is a transmission bridge? Explain in detail about stone transmission bridge and Hayes transmission bridge with neat sketches. [16]
6. What is Modulation? What is the function of a MODEM in case of long-distance data communication over analog telephone lines? Discuss about the different modulation (keying) techniques employed? [16]
7. (a) Compare link state and distance vector routing.
   (b) What is Dijkstra's algorithm and how is it useful in Link-state routing. Explain with illustration. [6+10]
8. (a) Derive an expression for the normalized throughput of roll-call polling if a station has a packet to send with a probability 'p', the number of stations 'N', the mean round-trip delay in accessing a station is 'R', the medium, bandwidth 'b', a poll/reply length of 'l' bytes and message length of 'L' bytes.
   (b) Compute peak achievable through put for p=0.012, N=1050, R=0.1s, b=10Mbps, L=500bytes, l=10bytes. [10+6]

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Code No: 07A51701 **R07** **Set No. 4**

III B.Tech I Semester Examinations,December 2011
BASICS OF TELEMATICS
Electronics And Telematics

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Compare the packetization delay for an ATM cell and for a 1500 byte packet.
   (b) What is the influence of packet size on:
      i. Line scheduling
      ii. Buffer hardware. [8+8]

2. What is a transmission bridge? Explain in detail about stone transmission bridge and Hayes transmission bridge with neat sketches. [16]

3. (a) Derive an expression for the normalized throughput of roll-call polling if a station has a packet to send with a probability 'p', the number of stations 'N', the mean round-trip delay in accessing a station is 'R', the medium, bandwidth 'b', a poll/reply length of 'l' bytes and message length of 'L' bytes.
   (b) Compute peak achievable through put for p=0.012, N=1050, R=0.1s, b=10Mbps, L=500bytes, l=10bytes. [10+6]

4. (a) Compare link state and distance vector routing.
   (b) What is Dijkstra's algorithm and how is it useful in Link-state routing. Explain with illustration. [6+10]

5. Write notes on the following:
   (a) Time division switch
   (b) Space division switch. [8+8]

6. What is Modulation? What is the function of a MODEM in case of long-distance data communication over analog telephone lines? Discuss about the different modulation (keying) techniques employed? [16]

7. (a) Explain in detail about IEEE 488 parallel interface.
   (b) Describe the following interface standards:
      i. X.29
      ii. X.26
      iii. X.27
      iv. X.20. [8+8]

8. Discuss about supervisory and metering circuits in an auto exchange. [16]

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Code No: 07A51701 **R07** **Set No. 1**

III B.Tech I Semester Examinations,December 2011
BASICS OF TELEMATICS
Electronics And Telematics

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What is Modulation? What is the function of a MODEM in case of long-distance data communication over analog telephone lines? Discuss about the different modulation (keying) techniques employed? [16]

2. (a) Compare the packetization delay for an ATM cell and for a 1500 byte packet.
   (b) What is the influence of packet size on:
      i. Line scheduling
      ii. Buffer hardware. [8+8]

3. (a) Explain in detail about IEEE 488 parallel interface.
   (b) Describe the following interface standards:
      i. X.29
      ii. X.26
      iii. X.27
      iv. X.20. [8+8]

4. What is a transmission bridge? Explain in detail about stone transmission bridge and Hayes transmission bridge with neat sketches. [16]

5. Write notes on the following:
   (a) Time division switch
   (b) Space division switch. [8+8]

6. (a) Derive an expression for the normalized throughput of roll-call polling if a station has a packet to send with a probability 'p', the number of stations 'N', the mean round-trip delay in accessing a station is 'R', the medium, bandwidth 'b', a poll/reply length of 'l' bytes and message length of 'L' bytes.
   (b) Compute peak achievable through put for p=0.012, N=1050, R=0.1s, b=10Mbps, L=500bytes, l=10bytes. [10+6]

7. (a) Compare link state and distance vector routing.
   (b) What is Dijkstra's algorithm and how is it useful in Link-state routing. Explain with illustration. [6+10]

8. Discuss about supervisory and metering circuits in an auto exchange. [16]

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Code No: 07A51701 **R07** **Set No. 3**

III B.Tech I Semester Examinations,December 2011
BASICS OF TELEMATICS
Electronics And Telematics

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Derive an expression for the normalized throughput of roll-call polling if a station has a packet to send with a probability 'p', the number of stations 'N', the mean round-trip delay in accessing a station is 'R', the medium, bandwidth 'b', a poll/reply length of 'l' bytes and message length of 'L' bytes.
   (b) Compute peak achievable through put for p=0.012, N=1050, R=0.1s, b=10Mbps, L=500bytes, l=10bytes. [10+6]

2. What is Modulation? What is the function of a MODEM in case of long-distance data communication over analog telephone lines? Discuss about the different modulation (keying) techniques employed? [16]

3. (a) Compare link state and distance vector routing.
   (b) What is Dijkstra's algorithm and how is it useful in Link-state routing. Explain with illustration. [6+10]

4. What is a transmission bridge? Explain in detail about stone transmission bridge and Hayes transmission bridge with neat sketches. [16]

5. (a) Explain in detail about IEEE 488 parallel interface.
   (b) Describe the following interface standards:
      i. X.29
      ii. X.26
      iii. X.27
      iv. X.20. [8+8]

6. (a) Compare the packetization delay for an ATM cell and for a 1500 byte packet.
   (b) What is the influence of packet size on:
      i. Line scheduling
      ii. Buffer hardware. [8+8]

7. Write notes on the following:
   (a) Time division switch
   (b) Space division switch. [8+8]

8. Discuss about supervisory and metering circuits in an auto exchange. [16]

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