


SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)
Subject with Code : HSN(18EC4006)
Course & Branch: M.Tech - DECS
Year & Sem: I-M.Tech & I-Sem
UNIT – I

1. Why high-speed networking is so important? Use your own examples to illustrate the Importance of high-speed networks? [10M]
2. What is QOS and why is it so important? [10M]
3. What are the main key-factors in communication network evaluation? Explain each parameter briefly? [10M]
4. What are the main approaches to network design?
 - a. Specify the characteristics of high performance networks in detail? [5M]
 - b. What are the different network elements explain their functions? [5M]
5. Briefly explain about switching techniques? [10M]
6. What is the role of high speed networks in real time explain with a neat example? [10M]
7. Draw the OSI reference model and explain each layer clearly? [10M]
8. Explain the role and importance of network mechanism in high need works
 - a. Explain about traffic characterization in detail [5M]
 - b. explain various types of network elements and their functionality [5M]
9. What are the different network services available in HSN and explain in detail [10M]
10. Draw the TCP/IP reference model and explain each layer clearly [10M]

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UNIT –II

1. Explain protocol architecture frame format, routing and congestion in Frame relay? [10M]
2. What are the ATM traffic parameters and QOS parameters defined by ATM explain? [10M]
3. a. Briefly describe the relationship of ATM and B-ISDN [5M]
 b. List the major advantages and disadvantages with the layered approach to protocols? [5M]
4. Explain about ISDN protocol architecture with suitable diagrams? [5M]
 b. Explain performance of TCP over ATM [5M]
5. Briefly describe the relationship of Frame Relay and ISDN [10M]
6. a. Explain ATM Protocol architecture with a neat block diagram [5M]
 b. What is Frame Relay? [5M]
7. Write about evolution of broadband ISDN (B-ISDN) with neat sketch [10M]
8. a. Explain the various types of channels in ISDN [5M]
 b. Write the differences between B-Channel and D- Channel in ISDN [5M]
9. Explain ABR traffic management. [10M]
10. Explain ATM based services & applications [10M]

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1. What is meant by ATM Adaption layer explain its functions? [10M]
2. Explain the following in ATM networks
 - a. Virtual channels [5M]
 - b. Virtual paths [5M]
3. What are the services of the ATM adaptation layer? Explain the operations of various AAL PROTOCOLS? [10M]
4. What is the ATM cell header explain its operation? [10M]
5. a. Explain the types of AAL Protocols. [5M]
b. Explain about ATM cell source characteristics. [5M]
6. a. Describe the features of various AAL protocols. [5M]
b. Explain how generic flow control is done in ATM networks. [5M]
7. With a neat diagram explain AAL 3/4 transmission in detail. [10M]
8. a. Explain traffic management issues in detail. [5M]
b. Explain the effect of error in cell header in detail. [5M]
9. Describe the different traffic parameters of ATM and explain why so many parameters are needed. [10M]
10. Describe the factors that affect the ATM QoS parameters and discuss the impact of these factors on various ATM QoS parameters. [10M]

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UNIT –IV

1. What is meant by Banyan Network explain [10M]
2. What are the advantages of rearrangeable class network explain the concept of rearrangeable networks [10M]
3. Discuss about looping algorithm and write the differences between looping algorithm and folding algorithm [10M]
4. Discuss about routing algorithm and blocking phenomenon [10M]
5. Explain about
 - a. Batcher Banyan network [5M]
 - b. crossbar switch [5M]
6. Draw the structure of rearrangeable class network and explain it properly [10M]
7. Explain about three stage class networks with a neat diagram [10M]
8. Explain bens network with a suitable structure [10M]
9. Discuss about folding algorithm and its advantages & applications [10M]
10. Discuss about crossbar switch and banyan networks and mention their advantages. [10M]

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UNIT –V

1. a. TCP IP has two transport protocols. TCP and UDP. What are the key differences between them [10M]
- b. Discuss about internetworking [10M]
2. What are the main approaches in ATM Addressing explain clearly [10M]
3. What is meant by UDP explain the services and header format clearly [10M]
4. Explain about UNI signaling with suitable diagrams [10M]
5. Explain different techniques used in implementing retransmission timer management [10M]
6. a. Explain the TCP congestion control in detail [5M]
- b. Explain the TCP services and header format [5M]
7. Explain briefly about
 - a. PNNI Signaling [5M]
 - b. PNNI Routing [5M]
8. Explain about integrated and differentiated services [10M]
9. Explain about TCP congestion control [10M]
10. Write note on
 - a. TCP/IP over ATM [5M]
 - b. Performance of data communication over ATM. [5M]

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