

BITS, Pilani-Dubai,Campus
Knowledge Village,Dubai
IVth Year FIRST Semester 2005-2006
Degree:B.E.(Hons) Branch:C.S.E

COURSE NO. : EA UC451

COURSE TITLE: INTERNETWORKING TECHNOLOGIES

Comprehensive Examination Closed book Time:3 hrs Date :4-1-2006
Total Marks=70

Part-A

Answer any 10 questions. All questions carry equal marks (10*2=20marks)

- Q1.Outline the merit of scan-edf algorithm over edf algorithm for disk scheduling in the case of multimedia servers.
- Q2.Outline briefly the snippets of pseudo code or java code for communication between server and client using socket communication
- Q3.Compare briefly the relative merits and demerits of using UDP/TCP for sending MM packets across the network.
- Q4.Outline briefly how using RSVP , QOS can be improved for MM traffic across the network?
- Q5.Outline with relevant examples the difference between inter media, intra media temporal relationship for multimedia streams.
- Q6.What are the drawbacks of UDP in carrying real-time MM traffic and how using RTP that can be sorted out ?
- Q7. What are the types of entities that can be modeled using network simulator II ?
- Q8. Outline with examples the difference between modeling and simulation of networks ?
- Q9. Compare the iterative technique with non-iterative technique for requirements gathering in design of Multimedia networks.
- Q10.Outline the difference in time delays at the transmitting end of MM networks that employ stored MM and Live MM ?
- Q11.Outline how integrity of information is preserved when Alice and Bob communicate via secured sockets layer
- Q12.Outline how the improved design of IPV6 header results in better network performance compared to IPV4 header.

Part-B

Answer all the questions. All questions carry equal marks (5 *10=50marks)

- Q1.a) Outline the need for network management protocol. (2)
- b) Sitting at a centralized place I want to monitor the health of a local area network.

Suggest an appropriate network management protocol and architecture to do the monitoring. Also suggest the appropriate commands that need to be supported by the monitoring system.(3)

c) Outline broadly the information contained in the System MIB module.(3)

d) What are the types of generic traps supported by network management protocol.(2)

Q2.a) Outline two broad approaches for building a corporate intranet of a corporation that has multiple geographic sites and their relative merits and demerits.(3)

b) Outline with appropriate block diagram how an organization's intranet can be devised to have the twin advantages of retaining confidentiality as well as low cost using the so called virtual private networks?(4)

c) Outline with appropriate diagrams the process of tunneling that is used in VPN to keep the information in the datagram confidential.(3)

Q3.a) Outline how authentication is done in the case of WEP protocol used in wireless lan? (3)

b) Outline how data is encrypted using WEP encryption algorithm between a host and access point?(4)

c) Using a particular scenario outline the vulnerability of WEP algorithm (3)

Q4.a) Outline the difference between DCOM and message oriented middleware protocols.(3)

b) Outline the need for application servers?(2)

c) Outline with appropriate block diagrams the two types of messaging supported by the JMS protocol.(3)

d) Outline the two different techniques by which a receiver can consume the message from the queue? (2)

Q5 a) Outline the drawbacks of protocols like DCOM, and RMI for distributed computing across the internet?(3)

b) Suggest a suitable protocol using which the above limitation can be overcome?(2)

c) Using appropriate web services model outline the interactions that can take place between various entities before a web service is invoked.(3)

d) What is need for WSDL in web services?(2)

BITS, Pilani-Dubai,Campus

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IV th Year FIRST Semester 2005-2006

Degree:B.E.(HONS) Branch:C.S.E

COURSE NO. : EA UC451

COURSE TITLE : : Internetworking Technolog

Time :50 mts

Date : 20-11-2005

Marks: 28 Test2

Answer all the questions . Open book

1. Outline the various steps involved when two systems called web browser and web server send confidential information using secured sockets layer by exchanging the certificates. Use relevant diagrams. (6 M)
2. a) Outline clearly the problems that will arise when a mobile node tries to communicate with the non mobile node via the internet ? (3 marks)
b) How the problems mentioned above are sorted out using mobile ipv6 ? (3 marks)
3. a) Outline clearly the difference in stateless and stateful address configuration in IPV6? (3 m)
b) what is the advantage and disadvantage of having high hop count in IPV6 (2 m)
c) why the max packet size is restricted to 64 K in TCP/IPV6? (2m)
4. a) Why there is a need for fragmentation of packets in TCP/IP ? (2 m)
b) Outline the difference in fragmentation of IPV6 and IPV4 packets and the significance of that and the significance of that ? (2 m)
5. Assume that m/c s 1,2,3 and 4 are networked. Suppose i have created an intelligent aglet in m/c1 called aglet1. Aglet1 want to create an identical aglet2 in machine1 to do some useful activity. Further assume that in machine2 alerady another aglet 3 is there. Aglet1 want to direct that aglet to goto another m/c 4. Outline how the above steps can be accomplished using aglet1? In addition to that outline briefly the in-built methods of the aglets that have to be invoked during the above scenario. (5 M)

BITS, Pilani-Dubai, Campus
Knowledge Village, Dubai
IVth Year Second Semester 2004-2005
Degree: B.E. (Hons) Branch: C.S.E

COURSE NO. : EA UC451

COURSE TITLE :: Internetworking Technologies

Time : 50 mts

Test1

Date: 2-10-2005

(Weightage = 20%)

Closed book

Max Marks: 30

Answer all the questions

Q1. Outline the drawbacks of MM traffic over UDP/IP and explain how the above drawbacks are overcome using RTP/RTCP protocol ? (6 marks)

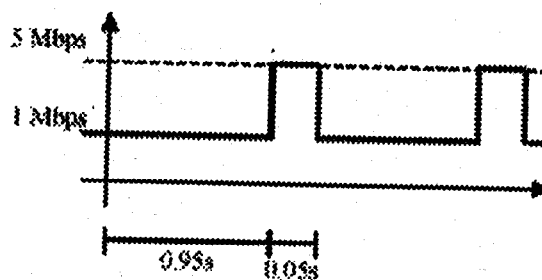
Q2.a) Outline with relevant examples multimedia networks having different classes of performance .

b) With respect to the streams 1 & 2 outline the bandwidth requirements and associated packet loss of multimedia networks that have different classes of performance..

Given two MPEG video streams:

Stream 1: _____
Stream 2: _____

Traffic Patterns



(2+2+2)

Q3.a) Outline two different approaches using which multimedia file can be received from a multi media server and played by the multimedia player. (3 marks)

b) Compare their relative merits and demerits.(3 marks)

Q4.a) Outline the difference between http and RTSP protocol for multimedia traffic.(3 marks)

b)When you transfer the audio packets using RTP headers how the overhead in the RTP headers is taken care of?(3 marks)

Q5.a)Find the number of bits required for an Multimedia encoding ADC to achieve a signal/Noise ratio of 80 db. (3 marks)

b) For storing 10 secs of digital audio information how much max disk storage is needed. Make relevant assumptions if necessary (3 marks)