

Code No: R32051

R10

Set No: 1

III B.Tech. II Semester Regular Examinations, April/May -2013

**ADVANCED COMPUTER NETWORKS**

(Computer Science and Engineering)

**Time: 3 Hours**

**Max Marks: 75**

Answer any FIVE Questions  
All Questions carry equal marks

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1. a) How Packet switching works in Computer networks? How it is different from physical circuits of Telecommunication networks. Compare circuit and packet switching.  
b) What are the tradeoffs in providing connection oriented and connection less services at network and transport layers?  
c) What is Load Shedding?
2. a) What are the differences between connection oriented and connection less internetworking?  
b) What are the different interconnecting devices available at different layers of a computer network?
3. a) What is the format of IPv4 header? Explain the different fields of it.  
b) What is the purpose of options of IPv4 header? Explain them.
4. a) How reliability is provided by TCP?  
b) What are the features of SCTP?
5. a) Define Congestion? What are the reasons for congestion?  
b) How different layers contribute to congestion?
6. a) In what way multicasting is used for multimedia?  
b) Why Audio and Video are compressed? How the compression takes place?  
c) What are the issues in transmitting audio and video over Internet?
7. a) Why specialized MAC is used in mobile networks?  
b) How the mobile IP works?
8. a) How Wireless sensor networks are different from adhoc network?  
b) How the energy is conserved in wireless sensor network?

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**ADVANCED COMPUTER NETWORKS**

(Computer Science and Engineering)

**Time: 3 Hours**

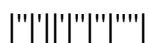
**Max Marks: 75**

Answer any FIVE Questions  
All Questions carry equal marks

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1. a) What are the main differences between connection oriented and connectionless services? What are the problems in providing these services at network layer?  
b) Compare Virtual circuit and datagram subnets?  
c) What are the characteristics of Adhoc networks?
2. a) Why IPv6 addressing is introduced? What are the salient features of IPv6 addressing?  
b) What is the need for Internetworking? What are the problems with internetworking?
3. a) What is the need for Fragmentation of the network? What are the issues associated with it? What is the difference between Transparent and Non-transparent fragmentation?  
b) What are the different fields that get affected during Fragmentation? How they vary with fragments?
4. a) What is the format of UDP header. Explain different fields of it?  
b) How window mechanism is used in TCP?
5. a) How congestion is controlled using Choke packets? What is the use of choke packets?  
b) How quality of service is measured?
6. a) What are the problems with static web content? How do you make the web content dynamic?  
b) Explain the important tags of HTML.
7. a) How the data is disseminated in mobile networks?  
b) What are the different security issues in mobile networks? How addressing the security issues in mobile networks is different from wired networks?
8. a) Explain the working of Wireless sensor networks?  
b) What are the issues in Wireless mesh networks?

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Set No: 3

III B.Tech. II Semester Regular Examinations, April/May -2013

**ADVANCED COMPUTER NETWORKS**

(Computer Science and Engineering)

**Time: 3 Hours**

**Max Marks: 75**

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain the working of Distance Vector routing. What is the main problem with Distance vector routing? What is the solution for it?
2. a) What is the problem with Classful addressing? Why Classless addressing is introduced and how it works?. Explain with the help of an example.  
b) How NAT helps an organization in using the addresses effectively?
3. Give the format of IPv6 header. Explain the fields of it. What is the need for extension headers?
4. a) What are multiplexing and demultiplexing? What is the need for them?  
b) How the UDP works?
5. a) How TCP controls congestion?  
b) How the resources can be reserved to provide quality of service? What are the limitations of it?
6. a) Why DNS service uses Distributed databases?  
b) Why DNS system is needed? How the DNS system works?
7. a) What are the applications of adhoc networks?  
b) What are the characteristics of adhoc network?  
c) Why TCP cannot be used directly in mobile networks?
8. a) Explain the wireless sensor network architecture?  
b) What are the characteristics of P2P networks?

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Set No: 4

III B.Tech. II Semester Regular Examinations, April/May -2013

**ADVANCED COMPUTER NETWORKS**

(Computer Science and Engineering)

**Time: 3 Hours**

**Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. a) What are the steps in Link state routing? How the steps are implemented?  
b) What is the difference between unicasting, multicasting, and broadcasting?
2. a) What is the difference between logical and physical addresses? What is the need for supporting two types of addresses?  
b) What is the range of different classes of IPv4 addresses? What are the special IPv4 addresses?
3. a) What are the fields which are similar in IPv4 and IPv6 header? What are the problems with transition from IPv4 to IPv6?  
b) How the checksum is computed in IPv4? Illustrate with the help of an example.
4. a) What is socket? What is the need for port addressing? Give the classification of ports.  
b) How the Client/Server environment works? What are the different levels in it?  
c) What are the applications for which UDP is suitable?
5. a) How scheduling helps in controlling congestion?  
b) How traffic shaping is useful for congestion control?
6. Explain the working of E-mail system?
7. Classify the routing protocols of adhoc networks? Compare them. Explain any one routing protocol in detail.
8. a) What are the significant characteristics of Wireless sensor network?  
b) Explain how Grid technology works?

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