30/11/2015 SE sem IV - IT - CBGS - CN

QP Code : **5377**

(3 Hours) [Total Marks : 80

N.B. : (1) Question No. 1 is are **compulsory**.
(2) Attempt any **three** questions out of **remaining** questions.
(3) Total **4** questions **need** to be **solved**.

1. (a) Compare circuit switched and packet switched networks. 5
(b) Waht is a network ? What are its goals and applications ? 5
(c) Differentiate between TCP and UDP. 5
(d) Explain framing in Data link Layer. 5

2. (a) What is OSI modes ? Give the function and services of each layer. 10
(b) Explain HDLC protocol along with its different frame structure. 10

3. (a) Explain CSMA/CD protocol. 10
(b) Describe about the different Guided transmission Medias. 10

4. (a) Explain the following with example :— 10
(i) Repeater
(ii) Hubs
(iii) Bridges
(iv) Swithces
(v) Router.
(b) What is Ip addressiing ? Explain ipV_4 datagram format ? 10

5. (a) What is Congestion and what are the causes of congestion ? Explain Token bucket algorithm of Congestion Control ? 10
(b) Explain TCP segment header format. 10

6. Explain any **four** :— 20
(a) Compare LAN, WAN, MAN.
(b) Network Topologies.
(c) PSTN
(d) Berkely sockets.
(e) Sliding window protocol.

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MD-Con. 8624-15.

S.E. IT sem IV CBSGS 19-5-16.

Sub:- Computer N/w

QP Code : 549602

(3 Hours) **| Total Marks : 80**

N.B. : (1) Question no. **1** is **compulsory**
(2) Attempt **any three** questions from the remaining questions.
(3) Total **four** questions need to be solved.

1. Answer any **four** **20**
   (a) Compare slotted ALOHA and Pure ALOHA.
   (b) Explain selective repeat protocol.
   (c) Explain TCP timer
   (d) Compare Linux and windows operating system
   (e) Explain PSTN.

2. (a) What is OSI model? Give the functions and services of each layer. **10**
   (b) Explain Guided Transmission media in detail. **10**

3. (a) What are the different types of routing algorithms? Explain shortest path routing algorithm in detail? **10**
   (b) Explain (i) IP address (ii) Subnet Mask **6**
   (c) An IPV_4 Packet has arrived with the first "8 bits" as shown : 0100 0010. The receiver discards? Why? **4**

4. (a) Draw and explain TCP segment heade. **10**
   (b) Explain TCP Congestion Control. **10**

5. (a) What is HDLC? Explain the frame formats of I-frame, U- frame and S-Frame? **10**
   (b) Compare Connetionless and connection oriented services. **5**
   (c) Explain Traditional Ethernet **5**

6. Write short notes on following (any **four**) **20**
   (i) Compare LAN, MAN, WAN
   (ii) BGP
   (iii) Explain CRC with example
   (iv) CDMA/CA
   (v) Bridges, Router, Switches.

Q.P. Code : 13124

[Time: Three Hours] **[Marks:80]**

Please check whether you have got the right question paper.

N.B: 1. Question.No.1 is compulsory.

Q. 1 Answer (any 4) 20

a) What are the functions of data link layer?
b) What is IP address, MAC address and Port address
c) How many networks and Hosts are possible using 'Class B' IP address? What is a subnet mask?
d) Compare Windows and Linux Operating system
e) What is p - persistent CSMA
f) Compare Circuit switched and Packet switched networks

Q. 2 a) Explain the frames of HDLC with a neat diagram. 10
b) Explain the OSI model in detail. List the networking devices used at each layer of the OSI model 10

Q. 3 a) Explain DVR with an example. What are the problems in DVR algorithm? 10
b) What is the difference between Stop and wait and Sliding window protocol? Explain Selective Repeat technique 10

Q. 4 a) Explain IP V4 header with a neat and labeled diagram, 10
b) What is congestion? Explain any one algorithm to control congestion in a network 10

Q. 5 a) Draw and explain TCP segment header. 10
b) What is Routing? Explain OSPF in detail. 10

Q. 6 Write short notes on (any 4) 20

a) Satellite Communication
b) ALOHA and its types
c) Switches, Repeaters, Gateway
d) TCP timers
e) CRC with an example

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Q.P. Code : 13123

[Time: Three Hours] **[Marks:80]**

Please check whether you have got the right question paper.

N.B: 1. Question No. 1 is compulsory.
2. Attempt any Three questions out of remaining questions.

Q. 1 Answer any four **20**

a) Compare Slotted ALOHA and Pure ALOHA.
b) Explain IP Address and Subnet Mask
c) Compare Circuit switched and Packet switched networks.
d) Explain Selective Repeat Protocol.
e) Piggybacking

Q. 2 a) What is OSI model? Give the function and service s of each layer. **10**
b) What are three main function of Network layer? What is Routing? Explain shortest path Routing. **10**

Q. 3 a) Draw and explain TCP segment header. **10**
b) Explain CSMA/CD protocol. **10**

Q. 4 a) Compare 802.3, 802.4 and 802.5 IEEE standard. **10**
b) Explain HDLC protocol along with its different frame structure. **10**

Q. 5 a) What is congestion control and what are the causes of congestion? Explain Token Bucket algorithm. **10**
b) What are the elements of Transport Layer **10**

Q. 6 Write short notes on **(Any Four)** **20**

i) Network Topologies
ii) Traditional Ethernet
iii) Mobile Telephone System
iv) RIP(Routing Information Protocol)
v) Berkely socket

IT/CBGS/IV/CN/01/12/16

Computer Networks/01/12/16 Q. P. Code : 549603

(3 Hou [Total Marks: 80]

N.B.: (1) Question No. 1 is compulsory.
(2) Attempt any Three questions out of remaining questions.

1. Answer any four **20**
(a) Discuss and compare various types of Networks.
(b) Explain PSTN.
(c) Compare Circuit switched and Packet switched networks.
(d) Differentiate between TCP and UDP.
(e) Explain Framing in Data link layer.

2. (a) Describe about the different Guided Transmission Medias **10**
(b) What are three main function of Network layer? What is Routing. Explain Distance vector Routing. **10**

3. (a) Explain the Connection Establishment and Termination in TCP with neat diagram. **10**
(b) Explain the functions of data link layer **10**

4. (a) Explain TCP Sliding Window protocol with neat diagram in detail. **10**
(b) Explain HDLC protocol with suitable diagram. **10**

5. (a) Explain the following with example :- **10**
(i) Repeaters (ii) Switches (iii) Hubs (iv) Routers (v) Bridges
(b) What are the elements of Transport Layer **10**

6. Write short notes on (Any Four) **20**
(i) GSM operation subsystem
(ii) Networking using Windows and LINUX operating system
(iii) Internet Control Protocol
(iv) Mobile Telephone System
(v) BGP.

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SE IT Sem IV CBGS

CN

21st May 2015

QP Code : 3647

(3 Hours) [**Total Marks : 80**

N.B. :1) Question No. 1 is Compulsory
2) Attempt any 3 questions out of the remaining questions
3) Total 4 questions need to be solved.

1. (a) "A datagram cannot be larger than the MTU of network over which it is sent. 'Is the statement true or false? Explain with the help of suitable example. 5
   (b) Suppose you have to develop an error recovery protocol for a link that is unreliable and delay sensitive, which of the following protocol would you to choose? Justify your answer. 5
      (i) Stop and wait
      (ii) Selective repeat
      (iii) Go back
   (c) How congestion is controlled in TCP? 5
   (d) The size of option field of an IP datagram is 20 bytes. What is the value of HLEN ? What is the value in binary? 5

2 (a) What is OSI model ? Give the function and services of each layer. 10
   (b) What is routing in network? Explain shortest path routing protocol. 10

3 (a) Explain the different classes of IP addresses and need of subnetting with the help of example. 10
   (b) Differentiate between message switching, circuit switching and packet switching. 10

4 (a) What is pure ALOHA and Slotted ALOHA? What is the efficiency. Justify your answer. 10
   (b) Draw and explain TCP Segment Header. 10

5. (a) Differentiate between TCP and UDP . 10
   (b) Explain the different transmission media in networking. 10

6. Write short notes on the following (any **four**) : 20
   (a) BGP
   (b) HDLC
   (c) TCP Timers
   (d) Hubs, Switches and Bridges
   (e) CRC and checksum.

JP-Con. : 9998-15.

S.E. I.T. Sem IV (CBGS) 27/11/14
CN.

Q.P. Code : 12452

(3Hours) **[Total Marks : 80**

N.B. (1) Question No.**1** is **compulsory.**
(2) Attempt any **3** questions out of remaining questions.
(3) Total **4** questions need to be **solved.**

1. (a) Explain collision detection procedure in CSMA/CD. **5**
   (b) Consider a message 11010011101100, divisor 1011. Compute n bit binary CRC. **5**
   (c) Compare circuit switched and pachet switched networks. **5**
   (d) Differentiate between connection oriented and connectionless services. **5**

2. (a) What are the three main functions performed by network layer ? What is routing. Explain distance vector counting. **10**

   (b) What is IP address ? Why it is required ? What is subnet mask ? Explain is subnetting and supernetting with Explain. **10**

3. (a) Explain TCP conquestion control. **10**
   (b) Explain connection establishment and termination in TCP with neat diagram. **10**

4. (a) Explain HDLC protocol with sutiable diagram. **10**
   (b) Explain TCP sliding window with neat diagram in detail. **10**

5. (a) Explain TCP timer management and transaction TCP. **10**
   (b) A IP header from an IP packet received at destination 4500003c1c4640004006b1e6ac100a63ac100a0c. Map these values to IP header and explain all bits. **10**

6. Write short note (any **four**) :- **20**
   (i) Network topology
   (ii) GSM operation subsystem (OSS)
   (iii) Link state routing
   (iv) Framing at data link layes.
   (v) Networking using windows and LINUX operating system
   (vi) Static channel allocation of LAN & MAN.

GN-Con.:8581-14.

SE - IT - CBCS
sem - IV - CN
23/5/14

QP Code : NP-19737

(3 Hours) [Total Marks :80]

N.B. (1) Question No. **1** is **Compulsory.**
(2) Attempt any **three** questions out of remaining questions.
(3) Figures to the right indicate full marks.
(4) Assumptions made should be clearly stated.
(5) Assume suitable data wherever required and justify it.

1	(a) What is a network? What are its goals and applications?	05
	(b) Discuss and compare various types of networks.	05
	(c) Is there any relationship between transmission media and topology?	05
	(d) What are the goals of TCP/IP Model?	05
2	(a) What is OSI Model? Explain the functions and protocols and services of each layer.	10
	(b) Describe about the different Guided transmission Medias.	10
3	(a)Explain the functions of data link layer.	10
	(b)Explain the Taxonomy of multiple access protocols.	10
4	(a)Explain different categories of routing algorithms.	10
	(b)What is IP addressing? How it is classified? How is subnet addressing is performed.	10
5	(a)What are the elements of transport protocols?	10
	(b)Explain TCP Congestion Control.	10
6	Write short notes on (any 4):-	20
	a) Connection oriented and connectionless service.	
	b) Sliding window protocol.	
	c) Mobile Telephone system.	
	d) Communication Satellite	
	e) Internet Control protocols.	
	f) UDP	

Con. 11567-14.