

Enrollment No.....



Faculty of Science
End Sem (Even) Examination May-2018
BC3CO14 Computer Networks

Programme: B.Sc.(CS) Branch/Specialisation: Computer Science

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. How many layers does OSI model has **1**
(a) 5 (b) 7 (c) 3 (d) 6
- ii. A device that connects networks with different protocols – **1**
(a) Switch (b) Hub (c) Gateway (d) Proxy Server
- iii. transmission systems are widely used in the backbone of **1**
networks.
(a) Unshielded Twisted Pair(UTP) (b) Shielded Twisted Pair (STP)
(c) Optical Fiber (d) Wireless
- iv. used in telephone network for bi-directional, real time transfer **1**
between computers.
(a) Message switching (b) Circuit switching
(c) Packet switching (d) Circular switching
- v. Which one of the following task is not done by data link layer? **1**
(a) Framing (b) Error control
(c) Flow control (d) Channel coding
- vi. The network layer concerns with **1**
(a) Bits (b) Packets (c) Frames (d) None of these
- vii. Which one of the following routing algorithm can be used for network **1**
layer design?
(a) Shortest path algorithm (b) Distance vector routing
(c) Link state routing (d) All of these
- viii. Automatic repeat request error management mechanism is provided by **1**
(a) Logical link control sublayer
(b) Logical link control sublayer
(c) Network interface control sublayer
(d) None of these

- ix. The _____ translates internet domain and host names to IP **1**
address.
(a) Domain name system (b) Routing information protocol
(c) Network time protocol (d) Internet relay chat
- x. Which one of the following is a transport layer protocol? **1**
(a) Stream control transmission protocol
(b) Internet control message protocol
(c) Neighbour discovery protocol
(d) Dynamic host configuration protocol

- Q.2 i. Define network. **2**
ii. Differentiate between a passive and an active hub? **3**
iii. Explain the TCP/IP reference model with diagram. **5**
OR iv. Draw and explain OSI Model. **5**
- Q.3 i. Draw neat diagram and explain the components of data communication. **4**
ii. Write a short note on guided media? Explain any two in detail. **6**
OR iii. What is Spread Spectrum? Explain any one method in detail? **6**
- Q.4 i. Explain the two types of CSMA. **3**
ii. Describe the stop and wait protocol for data link layer, along with its **7**
advantages and disadvantages.
OR iii. Differentiate between Go-BackN and Selective Repeat protocol. **7**
- Q.5 i. Compare IPV4 and IPV6. **4**
ii. Brief out the different primitives available for a simple transport **6**
service.
OR iii. Illustrate with diagram the five address formats used in internet. **6**
- Q.6 Attempt any two:
i. Compare Connection oriented and connectionless services. **5**
ii. Explain HTTP? What are the features of HTTP? Explain Http request **5**
header and response header.
iii. Elaborate the term cryptography and digital signature. **5**

Marking Scheme

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Q.1	i.	How many layers does OSI model has (b) 7		1
	ii.	A device that connects networks with different protocols – (a) Switch		1
	iii. transmission systems are widely used in the backbone of networks. (c) Optical Fiber		1
	iv. used in telephone network for bi-directional, real time transfer between computers. (b) Circuit switching		1
	v.	Which one of the following task is not done by data link layer? (d) Channel coding		1
	vi.	The network layer concerns with (b) Packets		1
	vii.	Which one of the following routing algorithm can be used for network layer design? (d) All of these		1
	viii.	Automatic repeat request error management mechanism is provided by (a) Logical link control sublayer		1
	ix.	The _____ translates internet domain and host names to IP address. (a) Domain name system		1
	x.	Which one of the following is a transport layer protocol? (a) Stream control transmission protocol		1
Q.2	i.	Definition network.		2
	ii.	Differentiate between a passive and an active hub (Minimum two difference 1.5 marks each)		3
	iii.	TCP/IP reference model layer diagram with description		5
OR	iv.	OSI Model layer diagram with description		5
Q.3	i.	Components of data communication. Diagram	2 marks 2 marks	4
	ii.	Guided media Any two in detail (2 marks each)	2 marks 4 marks	6

OR	iii.	Spread Spectrum Any one method in detail	2 marks 4 marks	6
Q.4	i.	Definition and Two types of CSMA.		3
	ii.	Stop and wait protocol for data link layer Its advantages Its disadvantages.	3 marks 2 marks 2 marks	7
OR	iii.	Differentiate between Go-BackN and Selective Repeat protocol. (Minimum 4 difference)		7
Q.5	i.	Compare IPV4 and IPV6. Three Differences		4
	ii.	Five service primitives		6
OR	iii.	Five address formats used in internet.		6
Q.6		Attempt any two:		
	i.	Compare Connection oriented and connectionless services. (Minimum three difference)		5
	ii.	HTTP Features of HTTP Http request header Http response header	1 mark 2 marks 1 mark 1 mark	5
	iii.	Cryptography Digital signature.	2.5 marks 2.5 marks	5
