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CS-68

BACHELOR IN COMPUTER APPLICATIONS

02302

Term-End Examination

June, 2010

CS-68 : COMPUTER NETWORKS

Time : 3 hours *Maximum Marks : 75*

Note : *Question **one** is **compulsory**. Answer **any three** from the rest.*

1. (a) Which transmission mode (simplex, half duplex for full duplex mode) can be compared to the following : **3**

- A conversation through a mobile phone
- Television/Radio
- Conversation on Walky - Talky

(b) Which OSI layer is responsible for the following : **5**

- End to End reliable communication service
- WWW
- Fragmentation of a packet
- Error control
- Compression/Decompression

(c) Write the name of topology type, which matches the following characteristics. 3

- New devices can be added easily
- Failure of a device cause a system failure
- Control is done through a central device

(d) Differentiate between the followings through examples. 2+2+4

- Baseband and broadband communication
- Analog and Digital signal
- Circuit switching and packet switching

(e) Explain the operation of a selective repeat protocol with the help of a diagram. 5

(f) Draw the diagram for Header format of user-network interface of ATM network. Also explain the use of each field in it 6

2. (a) Explain the operation of a switch with the help of a diagram. 4

(b) Explain how the notion of multiplexing can be applied on physical and transport layer ? 5

(c) Briefly describe three applications of ISDN. 6

3.	(a)	Draw the TCP/IP network architecture. Explain the functionalities of the various layers and also list its important protocols.	10
	(b)	Explain the concept of frame relay.	5
4.	(a)	List and explain features of different ISDN interfaces.	5
	(b)	List and explain services provided by Data Link layer.	5
	(c)	Explain the concept of signalling used in ISDN.	5
5.	(a)	Explain the concept of a remote procedure call with the help of a diagram	7
	(b)	Explain the characteristics of twisted pair cable.	4
	(c)	List and explain factors for occurrence of congestion in a network.	4