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Term End Examination - June, 2018
Diploma/ Post Graduate Diploma in Cyber Security
DCS-02/CSP-011: DATA COMMUNICATION AND
NETWORKING

Time - 3 Hours

Full Mark - 100

(Answer all questions form Group-A , any four questions from Group -'B', any four questions from Group -'C' and any two questions from Group -'D')

Group 'A'

Mark: 1 × 10 = 10

(Answer all questions)

Q. No. 1 Choose the correct answer

- (i) OSI stands for
- | | |
|--------------------------------|---------------------------------------|
| a) open system interconnection | c) the optical service implementation |
| b) operating system interface | d) none of these |
- (ii) In computer, communication media includes
- | | |
|-----------------------------|---------------------------|
| a) standard telephone lines | c) microwave transmission |
| b) coaxial cables | d) all of these |
- (iii) Unguided communication media is
- | | |
|----------------------|-----------------------|
| a) coaxial cable | c) twisted pair cable |
| b) fiber optic cable | d) satellite |
- (iv) The data link layer takes the packets from _____ and encapsulates them into frames for transmission.
- | | |
|----------------------|-------------------|
| a) transport layer | c) network layer |
| b) application layer | d) physical layer |
- (v) Which sub-layer of the data link layer performs data link functions that depend upon the type of medium?
- | | |
|-----------------------------------|--|
| a) logical link control sub-layer | c) network interface control sub-layer |
| b) media access control sub-layer | d) none of these |
- (vi) CRC stands for
- | | |
|----------------------------|--------------------------|
| a) cyclic repeat check | c) code redundancy check |
| b) cyclic redundancy check | d) code repeat check |
- (vii) Which transmission media has the highest transmission speed in a network?
- | | |
|-----------------------|---------------------|
| a) twisted pair cable | c) optical fiber |
| b) coaxial cable | d) electrical cable |
- (viii) Wireless transmission can be done via
- | | | | |
|----------------|---------------|-------------|-----------------|
| a) radio waves | b) microwaves | c) infrared | d) all of these |
|----------------|---------------|-------------|-----------------|

- (ix) The physical layer is responsible for
- a) line coding
 - b) modulation
 - c) channel coding
 - d) all of these
- (x) The OSI model has ___ layers.
- a) 4
 - b) 5
 - c) 6
 - d) 7

Group 'B'

Mark: 5 × 4= 20

Q. No. 2 (Answer any four questions each within 50 words)

- a) Define a computer network. What is its need?
- b) What is the basic purpose of setting up a LAN?
- c) What are the advantages and disadvantages of twisted pair cable?
- d) Which layer of OSI layer is responsible for node-to-node delivery?
- e) What do you mean by logical address of a node in the network?
- f) Name the components of a data communication system.

Group 'C'

Mark: 10 × 4= 40

Q. No. 3 (Answer any four questions each within 200 words)

- a) What is the basic purpose of setting up a LAN in networks?
- b) Discuss the features of wireless transmission media.
- c) What is Modulation? Explain about different types of modulation.
- d) Differentiate between TCP and UDP.
- e) Discuss the advantages and disadvantages of Time Division Multiplexing.
- f) What is the principle of Token ring?

Group 'D'

Mark: 15 × 2= 30

Q. No.4 (Answer any two questions each within 250 words)

- a) Discuss the functions of different layers of OSI Model
- b) Compare the merits and demerits of wired and Wireless transmission Media.
- c) Differentiate between the Packet Switching and Circuit Switching.
- d) Write the features of LAN, MAN and WAN.
