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Term End Examination – June - 2018
Diploma in Computer Applications
DCA-03: NETWORK FUNDAMENTALS

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
 - b) operating system interface
 - c) optical service implementation
 - d) none of the above
- (ii) A set of rules that governs data communication
 - a) Protocols b) Standards c) RFCs d) None of the above
- (iii) The _____ is the physical path over which a message travels
 - a) Path b) Medium c) Protocol d) Route
- (iv) Bluetooth is an example of
 - a) personal area network
 - b) local area network
 - c) virtual private network
 - d) none of the above
- (v) The functionalities of presentation layer includes
 - a) Data compression
 - b) Data encryption
 - c) Data description
 - d) All of the above
- (vi) Which layer is responsible for process to process delivery?
 - a) network layer
 - b) transport layer
 - c) session layer
 - d) data link layer
- (vii) Transmission data rate is decided by
 - a) network layer
 - b) physical layer

- c) data link layer
- d) transport layer
- (viii) Data communication system spanning states, countries, or the whole world is
 - a) LAN
 - b) WAN
 - c) MAN
 - d) None of the above
- (ix) Data communication system within a building or campus is
 - a) LAN
 - b) WAN
 - c) MAN
 - d) None of the above
- (x) This is not an application layer protocol
 - a) HTTP
 - b) SMTP
 - c) FTP
 - d) TCP

Group 'B'

Mark: 5 × 4= 20

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

- a) What are the characteristics of data communication?
- b) What are the benefits of a computer network?
- c) How communication takes place in full duplex mode. Give an example.
- d) What do you mean by physical address?
- e) What is the basic purpose of a WAN?
- f) What is modulation? What are its types?

Group 'C'

Mark: 10 × 4= 40

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

- a) What are the functions of Data Link Layer of OSI Model?
- b) Differentiate between the analog and digital signals.
- c) What are different multiplexing techniques?
- d) Different between LAN and MAN.
- e) Write the advantages and disadvantages of optical fiber cable.
- f) Write a short note on E-Mail.

Group 'D'

Mark: 15 × 2= 30

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

- a) Discuss the functions of five different components of data communication system.
- b) What are the basic network topologies? Write the features, advantages and disadvantages of Star and Bus topology?
- c) Discuss about the WWW and the Internet. Write the applications of the Internet.
- d) Explain the functions of each layer of OSI Network Model in brief.
