

 **INTI International
University & Colleges**

**FINAL
Examination Paper**

(COVER PAGE)

Session : AUGUST 2018

Programme : Diploma In Information And Communication Technology (DICTN)
Diploma In Information Technology (DITN)

Course : ICT1105: Fundamentals of Networking

Date of Examination : 7 December 2018, (Friday)

Time : 11:00am – 1:00pm Reading Time : Nil

Duration : 2 Hours

Special Instructions :

SECTION A: Answer ALL multiple choice questions

SECTION B: Answer any THREE (3) essay questions

**IMPORTANT NOTE: THIS PAPER SHOULD NOT BE TAKEN OUT OF THE
EXAMINATION HALL.**

Material Permitted : Nil

Materials provided : OMR Sheets

Examiner(s) : Victor Raj Kolintiar and Karen Wong

Moderator : Noor Hasrina

This paper consists of 7 printed pages, including the cover page

DIPLOMA IN INFORMATION AND COMMUNICATIONS TECHNOLOGY
PROGRAMME (DICTN)
DIPLOMA IN INFORMATION TECHNOLOGY PROGRAMME (DITN)
ICT1105: FUNDAMENTALS OF NETWORKING
FINAL EXAMINATION: AUGUST 2018 SESSION

Section A: (40 marks)

Instruction: This section consists of **TWENTY (20)** questions. Answer **ALL** questions in the OMR sheet provided. All questions carry equal marks.

1. At the Network layer, what is a message called?
 - A. A packet
 - B. A frame
 - C. A segment
 - D. Bits

2. Which type of address is used at the Transport layer to identify the receiving application?
 - A. IP address
 - B. MAC address
 - C. Loopback address
 - D. Port number

3. What is the purpose of padding in an Ethernet frame?
 - A. Ensuring that the data portion of the frame totals at least 46 bytes
 - B. Ensuring that the frame and data arrive without error
 - C. Ensuring that the frame arrives in sequence
 - D. Indicating the length of the frame

4. In which of the following examples do the workstations necessarily share a collision domain?
 - A. Two computers connected to the same switch
 - B. Two computers connected to the same hub
 - C. Two computers connected to the same router
 - D. Two computers connected to the same gateway

5. _____ signals are composed of pulses of precise, positive voltages and zero voltages.
 - A. Analog
 - B. Digital
 - C. Traffic
 - D. Hand

6. You suspect that a machine on your network with the host name PRTSRV is issuing excessive broadcast traffic on your network. What command can you use to determine this host's IP address?
- A. nslookup PRTSRV
 - B. netstat PRTSRV
 - C. nbtstat PRTSRV
 - D. ipconfig PRTSRV
7. What happens in CSMA/CD when a node detects that its data have suffered a collision?
- A. It immediately retransmits the data
 - B. It signals to the other nodes that it is about to retransmit the data, and then does so
 - C. It signals to the network that its data was damaged in a collision, waits a brief period of time before checking the network for activity, and then retransmits the data
 - D. It waits for a random period of time before checking the network for activity, and then retransmits the data
8. The most common multiplexing technology used in conjunction with fiber optics is _____.
- A. WDM
 - B. DWDM
 - C. TDM
 - D. FDM
9. Which type of cross-talk occurs between wire pairs near the source of a signal?
- A. Alien cross-talk
 - B. Tx/Rx reverse
 - C. FEXT
 - D. NEXT
10. What fiber is used in fiber-optic cabling to protect the inner core and prevent the cable from stretching?
- A. Dollar
 - B. Pillar
 - C. Kevlar
 - D. Collar
11. What process is used to establish a TCP connection?
- A. Broad-way handshake
 - B. Speed-way handshake
 - C. Three-way handshake
 - D. Under-way handshake

12. What database does a router consult before determining the most efficient path for delivering a message?
- A. Switching table
 - B. Routing chair
 - C. Routing table
 - D. Switching chair
13. What of the following is **NOT** a TCP/IP utility?
- A. ping
 - B. pong
 - C. ipconfig
 - D. nslookup
14. Which Session layer protocol is a streaming live video teleconference likely to use on the network?
- A. UDP
 - B. SMTP
 - C. RTP
 - D. TCP
15. A _____ describes how the parts of a whole work together.
- A. human
 - B. network
 - C. map
 - D. topology
16. _____ is the loss of a signal's strength as it travels away from its source.
- A. Attenuation
 - B. Admission
 - C. Attention
 - D. Adoration
17. A _____ topology combines characteristics of more than one simple physical topology.
- A. composite
 - B. combined
 - C. hybrid
 - D. mixed
18. Which two encryption protocols might be used to provide secure transmissions for browser and Web server communications?
- A. SSL and TLS
 - B. HTTP and HTTPS
 - C. SSL and HTTP
 - D. TCP and UDP

19. What specification defined the standards for broadband cable?
- A. ATM
 - B. Digital signal
 - C. ANSI
 - D. DOCSIS
20. All types of remote access techniques require some type of _____, which accepts a remote connection and grants privileges to the network's resources.
- A. Remote Desktop
 - B. Remote Access Server (RAS)
 - C. Remote Applications
 - D. Remote Client

Section B: (60 marks)

Instruction: This paper consists of **FOUR (4)** questions. Answer any **THREE (3)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) Identify and explain **FIVE (5)** hardware equipment's that can be found inside a crimping tool kit. (10 marks)
- (b) (i) Draw **FOUR (4)** basic network topologies. (4 marks)
- (ii) Discuss each network topology drawn in part (i). (6 marks)

Question 2

- (a) Complete the following table to show comparison between TCP and UDP:

	TCP	UDP
1. Reliability		
2. Connectivity		
3. Windowing/Transmission		
4. Sequence		
5. Acknowledgement		

(10 marks)

- (b) Describe the following interconnecting devices:
- (i) Hubs
- (ii) Bridges
- (iii) Switches
- (iv) Routers
- (v) Gateways

(10 marks)

Question 3

- (a) Compare circuit switching and packet switching. (8 marks)
- (b) Explain the following **IEEE 802** standards:
- (i) 802.3
 - (ii) 802.4
 - (iii) 802.5
 - (iv) 802.11
 - (v) 802.16
 - (vi) 802.22
- (12 marks)

Question 4

- (a) Compare **Local Area Network (LAN)** and **Wide Area Network (WAN)**. (10 marks)
- (b) Discuss **FOUR (4)** fundamental properties of analog signal. (10 marks)

~ The End ~
ict1105(final)/august2018/formatted

