

FINAL
Examination Paper

(COVER PAGE)

Session : APRIL 2017

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1105: Fundamentals of Networking

Date of Examination : 03 August, 2017 (Thursday)

Time : 8:00am – 10:00am 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)
ICT1105: FUNDAMENTALS OF NETWORKING
FINAL EXAMINATION: APRIL 2017 SESSION

Instruction: This paper consists of **TWO (2)** SECTIONS. **Answer ALL** questions in **SECTION A** and any **THREE (3)** questions in **SECTION B**.

Section A: (40 marks)

Answer **ALL** questions in the OMR sheet provided.

1. Which command will display the assigned IP address of a network adapter installed on a Windows 7 system?
 - A. ipconfig
 - B. ipadapter/all
 - C. winIP
 - D. configip

2. Which item is an example of a physical network address?
 - A. 192.68.1.1
 - B. 1A:2B:3C:4D:5E:6F
 - C. Workstation name
 - D. www.proprofs.com

3. What is the purpose of a DNS server?
 - A. To resolve MAC addresses to IP address.
 - B. To resolve host names to NetBIOS names.
 - C. To resolve domain names to IP addresses.
 - D. To resolve IP addresses to MAC address.

4. On which of the following devices can you implement VLANs?
 - A. Repeater
 - B. Routers
 - C. Hubs
 - D. Switches

5. For which type of connection should a straight-through cable be used?
 - A. switch to switch
 - B. switch to hub
 - C. hub to hub
 - D. switch to router

6. Which of the following IPv4 addresses is the loopback address?
 - A. 127.0.0.1
 - B. 0.0.0.0
 - C. 1.1.1.1
 - D. 10.0.0.1

7. According to the specification, what is the maximum recommended length of a Category 5 (CAT5) Ethernet cable use at home/residential?
 - A. unlimited
 - B. 100 meters (328 feet)
 - C. 80 meters (263 feet)
 - D. 30 meters (100 feet)

8. In the OSI model, repeater is specified at:
 - A. Session layer
 - B. Application layer
 - C. Data Link layer
 - D. Physical layer

9. Which transport protocol does HTTP use?
 - A. TCP
 - B. FTP
 - C. TFTP
 - D. ICMP

10. Which of the following are associated with the application layer of the OSI model?
 - A. TCP
 - B. IP
 - C. HTTP
 - D. UDP

11. When the packet is passed from the lower layer to the upper layer, the headers will be _____.
- A. removed
 - B. added
 - C. reordered
 - D. no change
12. You wish to configure a router via a telnet session. A telnet server generally listens on TCP _____.
- A. Console port
 - B. Port 21
 - C. Port 23
 - D. Port 25
13. What type of RJ45 UTP cable is used between switches?
- A. Straight-through
 - B. Crossover cable
 - C. Crossover with a CSU/DSU
 - D. Crossover with a router in between the two switches
14. You want to implement a network medium that is not susceptible to EMI. Which type of cabling should you use?
- A. Thicknet coax
 - B. Thinnet coax
 - C. Category 5 UTP cable
 - D. Fiber-optic cable
15. Which one of the following protocols allows the information about the configuration of a new VLAN to be distributed across entire switched network?
- A. STP
 - B. VTP
 - C. DTP
 - D. SNMP
16. What is the port number for http service?
- A. 81
 - B. 79
 - C. 82
 - D. 80

17. Which of the following IP addresses is *correctly* converted into hexadecimal notation?
- A. 10.178.19.113 = 0A.B1.13.71
 - B. 10.23.193.237 = 0A.17.C1.ED
 - C. 10.42.164.211 = 0A.2B.A4.D3
 - D. 10.191.37.123 = 0A.BF.26.7B
18. Which of the following are examples of private IP addresses?
- A. 172.31.14.0
 - B. 172.33.0.10
 - C. 192.186.0.8
 - D. 224.1.1.2
19. In which of the following situations would using CAT 5 UTP cable be appropriate on a LAN?
- A. In an environment where there is a large amount of electromagnetic interference.
 - B. Where bandwidths of 1 gigabit per second need to be supported.
 - C. Where a host is 90 meters away from the nearest switch.
 - D. Where a host is 340 meters away from the nearest switch.
20. Which of the following is/are characteristic(s) of TCP?
- A. Establishes the network connection.
 - B. Manages the data transfer.
 - C. Support for error checking.
 - D. All the above.

Section B: (60 marks)

Answer any **THREE (3)** questions in the answer booklet provided.

Question 1

(a) Explain the use of the following IP addresses: (10 marks)

(i) 169.123.234.34

(ii) 127.100.1.100

(iii) 232.1.1.1

(iv) 255.255.255.255

(v) 248.8.8.100

(b) State the function of the following network commands for DOS: (10 marks)

(i) ping

(ii) ipconfig

(iii) nslookup

(iv) tracert

(v) netstat

Question 2

(a) Compare and contrast **FIVE (5)** differences of server and client. (*Note: You may use a table to answer this question*) (10 marks)

(b) Name and draw the **FIVE (5)** basic network topologies. (10 marks)

Question 3

- (a) State and explain **FIVE (5)** types of network service. (10 marks)

- (b) State and explain **FIVE (5)** Networking Standard Organizations. (10 marks)

Question 4

- (a) Classify the devices on Table 1 into respective category listed below. (10 marks)

Printer	Router
Hub	Modem
Bridge	Smart Phone
Wireless Access Point	L3 Switch
Switch	Server

Table 1

- (i) Layer-1 device
 - (ii) Layer-2 device
 - (iii) Layer-3 device
 - (iv) Layer-5 device
-
- (b) Explain the main function of the following servers: (10 marks)
 - (i) DHCP server
 - (ii) DNS server
 - (iii) FTP server
 - (iv) Email Server
 - (v) Web Server

~ The End ~

