MCA-I SEM-II

**Essentials of Networking IT-23**

**UNIT 07**

**Domain Name System(DNS)**

Part A] One mark MCQ

**Note:- Each Question carry one mark\**

**https://www.indianstudyhub.com/Networking-and-Internet/DHCP-Computer-Networks-Questions-and-Answers**

1. Which of the following devices translates hostnames into IP addresses?

a. DNS Server

b. Hub

c. DHCP Server

d. Firewall

A

2. The \_\_\_\_ translates internet domain and host names to IP address.

a. domain name system

b. routing information protocol

c. network time protocol

d. internet relay chat

A

3. What does a DNS client called?

a. DNS handler

b. DNS resolver

c. DNS updater

d. None of the above

B

4. DNS is the abbreviation of

A. Dynamic Name System

B. Dynamic Network System

C. Domain Name System

D. Domain Network Service

C

5. Which one of the following allows client to update their DNS entry as their IP address change?

A. dynamic DNS

B. authoritative name server

C. mail transfer agent

D. None of the above

A

6. What is an alias record used for?

A.creating an alternate record or alias for an existing record

B. a routable internal address (similar to the 192.168 address space)

C. in an unsecured location facing the internet

D. when you have a large number of single-name clients to support

A

7. What are the 3 strategies for updating DNS servers?

A dynamic, read-write, and read-only

B the Mail exchanger (MX) record

C a unique, internet-usable IP address

D in a highly-secure environment

A

8. What is the most common record type in DNS?

A dnscmd.exe

B Host (A) records

C. name records

D. None of the above

B

9. The entire hostname has a maximum of

a. 255 characters

b. 127 characters

c. 63 characters

d. 31 characters

A

10. Servers handle requests for other domains

a. directly

b. by contacting remote DNS server

c. it is not possible

d. none of the mentioned   
B

1. What is the purpose of the DHCP server?  
A – to provide storage for email  
B – to translate URLs to IP addresses  
C – to translate IPv4 addresses to MAC addresses  
D – to provide an IP configuration information to hosts  
Answer: D

  Which two tasks does the Dynamic Host Configuration Protocol perform? (Choose two)  
A. Set the IP gateway to be used by the network.  
B. Perform host discovery used DHCPDISCOVER message.  
C. Configure IP address parameters from DHCP server to a host.  
D. Provide an easy management of layer 3 devices.  
E. Monitor IP performance using the DHCP server.  
F. Assign and renew IP address from the default pool.  
Answer: C F

**What is the IP address pool available for lease to DHCP clients?**

A.NAT

**B.Scope**

C.Lease options

D.IP address pool

**What aspect of DHCP allows servers to manage multiple physical networks?**

A.Renewal

B.Rebinding

C.Scopes

D.Relay agents

How would a DHCP server respond to a client concerning errors?

A.DHCPOFFE

B.DHCPDECLINE

C.Destination unreachabl

D.DHCPNAK

**How many times does a client attempt to renew its lease during the lease?**

A.5

B.1

**C.3**

D.7

**What is at the top of the hierarchy tree of Domains?**

A..com

B.Root

C..mil

D..us

**What happens to the IP address if client has not received an extension?**

* + A.DHCPOFFER is sent
  + B.DHCPNAK is sent from server
  + C.Client drop the IP
  + D.DHCPDISCOVER is sent from server

**How would a DHCP server respond to a client concerning errors?**

* + A.DHCPOFFER
  + B.DHCPDECLINE
  + C.Destination unreachable
  + **D.DHCPNAK**

**Who controls/configures DHCP servers?**

* + A.Router software
  + **B.Network administrators**
  + C.Clients through DHCP options
  + D.Microsoft personnel

**What happens to the IP address if client has not received an extension?**

* + A.DHCPOFFER is sent
  + B.DHCPNAK is sent from server
  + **C.Client drop the IP**
  + D.DHCPDISCOVER is sent from server

Part B] Two mark MCQ

Note:- Each Question carry Two marks

1. Which of the following is true about Domain Name System (DNS)?

a.DNS is the client server application.  
b.It uses alias names for identifying the sender and receiver instead of an IP address. So the alias address has to be mapped to the IP address.  
c.It identifies sender and receiver so they should be known to each other.  
d.All of the above.

D

2. If a server has no clue about where to nd the address for a hostname then

a. server asks to the root server

b. server asks to its adjcent server

c. request is not processed

d. none of the mentioned

A

3. The right to use a domain name is delegated by domain name registers which are accredited by \_\_\_\_\_\_\_

Ainternet research task force

Binternet corporation for assigned names and numbers

Cinternet architecture board

Dinternet society

B

4. DNS database contains

a. name server records

b. hostname-to-address records

c. hostname aliases

d. all of the mentioned

D

5. Wildcard domain names start with label

a. @

b. \*

c. &

d. #

B

6. The domain name system is maintained by

a. distributed database system

b. a single server

c. a single computer

d. none of the mentioned

A

7. In a \_\_\_\_\_\_\_ name space, a name is assigned to an address. A name in this space is a sequence of characters without structure.

a. Flat

b. hierarchical

c. organized

d. none of the above

A

8. In the DNS, the names are dened in \_\_\_\_\_\_\_\_\_\_\_ structure.

a. a linear list

b. an inverted-tree

c. a graph

d. none of the above

B

9.` Each node in the tree has a \_\_\_\_\_\_\_, which is a string with a maximum of \_\_\_ characters.

a. label; 127

b. name; 255

c. label; 63

d. none of the above

C

10. The root of the DNS tree is \_\_\_\_\_\_\_.

a. a string of characters

b. a string of 63 characters

c. an empty string

d. none of the above

C

11. A full domain name is a sequence of labels separated by \_\_\_\_\_\_\_\_.

a. semicolons

b. dots

c. colons

d. none of the above

B

12. A \_\_\_\_\_\_\_\_ server loads all information from the disk le.

a. primary

b. secondary

c. zone

d. none of the abov

A

13. A \_\_\_\_\_\_\_\_ server loads all information from the primary server.

a. primary

b. secondary

c. zone

d. none of the above

B

14. When the secondary downloads information from the primary, it is called \_\_\_\_\_\_ transfer.

a. domain

b. zone

c. label

d. none of the above

B

15. In the Internet, the domain name space (tree) is divided into \_\_\_\_\_\_\_ dierent sections:

a. three

b. two

c. four

d. ve

A

16. In \_\_\_\_\_\_\_\_\_\_ resolution, the resolver expects the server to supply the nal answer.

a. iterative

b. recursive

c. straight

d. none of the above

B

17. In \_\_\_\_\_\_\_\_\_\_ resolution, the server returns the IP address of the server that it thinks can resolve the query.

a. iterative

b. recursive

c. straight

d. none of the above

A

18. In the domain name chal.atc.fhda.edu, \_\_\_\_\_\_\_ is the least specic label.

a. chal

b. atc

c. edu

d. none of the above

C

19. In the domain name chal.atc.fhda.edu, \_\_\_\_\_\_\_ is the most specic label.

a. chal

b. atc

c. fhda

d. none of the above

A

20. DNS can use the services of \_\_\_\_\_\_\_\_ using the well-known port 53.

a. UDP

b. TCP

c. either (a) or (b)

d. none of the above

C

Part C] Short Question

1. What is domain name system(DNS)?

Ans: Domain Name System (DNS )is a client server application

Domain Name Systems(DNS) maps domain names with Internet Protocol(IP) address, thus helping computer for translating human-readable(domain name) to machine-readable language(IP address).

**2. What is Nameserver?**

It is used for storing the information for the domain name to IP and IP to the domain name. In other words, the name server is used for storing records of the domain names, Name servers help for convert domain name to IP address.

**3. What is primary and secondary name server?**

Primary name server reads the data from the domain zone, it has DNS records of domain names and it replicates the data with the secondary name server.

A secondary name server is the back up of primary name server which is used for high reliability, in case the primary name server is having an issue or not reachable.

**4. What is DNS resolver?**

DNS resolvers are being used by ISP(Internet service provider) for the user request to resolve the domain name. If a user request for google.com, DNS resolver needs to contact TLD(Top Level Domain) i.e**.com,**for translation of domain name to IP address and it caches the data if the user again queries for the same domain, thus reducing the loads on the server and response time.

5. What is the difference between URL and Domain?

URL stands for Uniform Resource Locator. URL specifies the full address of a webpage.  It consists of three components: protocol(like HTTP, mailto, ftp), domain name(like freshersemploy.com) and file name(eg. homepage.html)

e.g.:

* <https://www.freshersemploy.com/>
* <https://www.freshersemploy.com/html-interview-questions-answers/>
* <mailto:admin@freshersemploy.com>

A domain is the name of a website with the top-level domain(like .com, .org etc.). A domain is a part of URL.

e.g.:

* <https://www.freshersemploy.com/>
* [admin@freshersemploy.com](mailto:admin@freshersemploy.com)

6. What is DNS server?

DNS servers resolve  IP address to respective hostnames and it maintains directory or database to store the information.

Example:

When we try to access the website (like freshersemploy.com), DNS servers help to translate to machine-readable language i.e. IP address(like 104.28.27.67).

**7. Explain SOA record?**

Start of Authority(SOA) records stores essential information(like refresh rate, expiry, TTL etc) in domain name system(DNS) in a zone file.

**Example:**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | ; name TTL class rr Nameserver email-address  freshersemploy.com. 12000 IN SOA  ns.nameserver.com. root.ns.nameserver.com.  (  2098163206 ; Serial number  12000 ; Refresh rate in seconds  3600 ; Update Retry in seconds  5788864; Expiry in seconds  100 ; minimum in seconds ) |

* **Serial Number:** It has the serial number, which gets increments whenever there is a change in the DNS records.
* **Refresh interval:** It gets refresh at the specific interval and if there any changes in the records, data is replicated.
* **Retry:** If the propagation gets failed, it will retry after specific time which is defined in the zone file.
* **Expire:** It is set to have an expiry date, as specified in the zone file. Also used for secondary server how long it should be active in case the primary DNS server is down.
* **TTL:** It has the default time-to-live(TTL),

A zone file should have only one SOA record and it must be at the top of it.

8. **What is the use of PTR in DNS?**

PTR(Pointer) records are used for mapping IP addresses which are associated with hostname name. It is also called has reverse DNS lookup as it resolves IP address to domain or hostname. There must be A record for every PTR record. PTR is mainly used for the mail server.

9. Explain Dynamic DNS?

Dynamic DNS helps for automatically updating the name servers whenever there is a change in the IP address in the Domain Name System(DNS).

10. **What is DNS Zone?**

A DNS zone file contains the mapping between a domain name, IP address, recourse records etc. in text representative format. Also, DNS zone refers to the administrative responsibility in the DNS.

<https://compscibits.com/mcq-questions/Networking/DNS/4>