



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE

QUALIFICATION: BACHELOR OF COMPUTER SCIENCE	
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DURATION: 2 HOURS	MARKS: 50

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION QUESTION PAPER	
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THIS QUESTION PAPER CONSISTS OF 4 PAGES
(Excluding this front page)

INSTRUCTIONS

1. Answer **all** questions.
2. Write all your answers in the answer booklet provided and number every question.
3. Please, ensure that your writing is **legible, neat** and **presentable**.
4. Marks/scores per question are given in square brackets [].
5. Do not use or bring into the examination venue books, programmable calculators, mobile devices and other material that may provide you with unfair advantage. Should you be in possession of one right now, draw the attention of the examination officer or invigilator.
6. All things that should **not** be marked, e.g. any "rough work", have to be crossed out unambiguously.

1. True or False

[10]

- (a) On a newly installed domain controller there are two group policy objects by default.
- (b) You can create a user without a password using the **net user** command in Windows Server 2012 domain controller.
- (c) The **password** command in Linux is used to change/set user password.
- (d) Given the url **www.google.com**, the top level domain will be **google.com**.
- (e) The symbol **1>** is used as an input redirection.
- (f) When promoting your domain controller for the first time, the preferred DNS server will be set to 127.0.0.1.
- (g) The **PTR** record in DNS is found in the reverse lookup zone.
- (h) To deploy non **.msi** software through group policy object you use the **.zap** file.
- (i) Linux kernel is called **ntldr**.
- (j) Ubuntu distributions use Advanced Package Tool Set and CentOS use RedHat Package Manager.

2. Multiple Choice

- i) All Windows 64 bit applications will be installed in
 - a) c:\Program Files
 - b) c:\Program Files (x86)
 - c) c:\Users
 - d) c:\Windows\System32
- ii) In Windows which symbol will be used to create a hidden share
 - a) \$
 - b) #
 - c) &
 - d) %
- iii) Which file will be used to store user details and passwords in Windows
 - a) SAM
 - b) passwd
 - c) shadow
 - d) User_Pass
- iv) In Linux users passwords are encrypted and stored in
 - a) /etc/users/encrypt
 - b) /etc/shadow
 - c) /etc/passwd
 - d) /etc/encrypt/passwd
- v) After typing **winver** command in Windows, if you get the following output:
Version 21H2 (OS Build 19044.2130)
21H2 means:
 - a) 21 Versions
 - b) 4 April 2019
 - c) 2021 second major update
 - d) 21 February

3. Short Questions

- (a) Which term is used to refer to a malicious software which can be inserted into a host/computer to damage or corrupt a system, replicate itself, or deny access to networks, systems, or services? [1]
- (b) When migrating from an old system to a new system, which method is quick and less expensive? State one disadvantage of this method. [2]
- (c) If you are a systems administrator for a company what measures would you put in place so that the computers within your organization are protected from computer viruses. [2]
- (d) How does the DNS **iterative** lookup process work? [2]
- (e) What is a group policy object? [2]
- (f) Explain how a systems administrator use the ping command to test DNS functionalities. [2]
- (g) What is incremental backup? State one advantage of this backup method. [3]
- (h) What is meant by lockout policy and password history in Windows? Give one reason why an administrator enables lockout policy. [3]

4. Long Questions

(a) Analyse Diagram A below and answer the questions which follow. Diagram A is a screen shot from a Windows 2012 DNS Server.

Name	Type	Data
_msdcs		
_sites		
_tcp		
_udp		
DomainDnsZones		
ForestDnsZones		
(same as parent folder)	Start of Authority (SOA)	[25], station254.cs.net, hostmaster.c
(same as parent folder)	Name Server (NS)	station254.cs.net.
(same as parent folder)	Host (A)	192.168.10.254
station254	Host (A)	192.168.10.254
Win8-Client01	Host (A)	192.168.10.11
station240	Host (A)	192.168.10.240
webserver	Host (A)	192.168.10.200
webserver	Host (A)	192.168.10.201
webserver	Host (A)	192.168.10.202
web	Alias (CNAME)	station240.cs.net
(same as parent folder)	Mail Exchanger (MX)	[5] station240.cs.net
(same as parent folder)	Mail Exchanger (MX)	[10] station254.cs.net

Diagram A

- (i) CNAME is an acronym for? [1]
- (ii) How many changes were made in the forward lookup zone? [2]
- (iii) From Diagram A above we can see that there are 3 IP addresses associated with the host **webserver**. Assuming that the company's website is hosted on **webserver**. Which server will respond if clients access the webserver via the preferred browser? Hence state the advantage of having one name associated with 3 IP addresses. [4]
- (iv) You have been hired as email server specialist. The client indicated that emails are going to one server only. The client told you that they want emails to be replicated to all email servers indicated in diagram A.
- (a) How many email server records are shown from diagram A? [1]

- (b) Which server is the preferred email server? [1]
(c) How do you make sure that emails will be replicated on all email servers? [2]
- (v) If the client machine accesses the url: **http://web**, what is the name of the machine with the resources which will be displayed? [2]

5. **Linux Commands/Linux**

(i) Write down the command to display the calendar for February 2023 [2]

(ii) Explain the following command:

`cat sad.txt | head -50 | tail -25` [2]

(iii) What will be the problem of entering the following command in Linux: [1]
`useradd -g 100 james -p Pa$$w0rd`

***** End of question paper *****

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