

**National Examination Paper:  
SYSTEM ADMINISTRATION**

**Level: L5**



# **MOCK FOR THE 2024/2025 NATIONAL EXAMINATIONS**

## **QUESTION PAPER**

<b>TRADE:</b>	<b>SOFTWARE DEVELOPMENT</b>
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**CANDIDATE NAMES:**

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**INDEX NUMBER:**

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**DURATION: 3 HOURS**

### **INSTRUCTIONS TO CANDIDATES:**

1. **Read and understand** all instructions before answering.
2. For multiple-choice questions, **choose only one correct answer** and clearly **circle the letter or number**.
3. **Erasing or altering** answers is strictly prohibited and will lead to **zero mark** for the affected question.
4. Use **only blue or black ink pens** (no pencils or colored pens)

**May 2025**

## ATTEMP ALL QUESTIONS

**01.** Answer by True(T) or False(F): **(4Marks)**

The ipconfig command is used to configure IP addresses on Linux.

**02.** Answer by True(T) or False(F): **(4Marks)**

A firewall is used to prevent unauthorized access to or from a private network.

**03.** Answer by True(T) or False(F): **(4Marks)**

BIOS is responsible for loading the operating system after the computer is powered on.

**04.** Match the system tools with their function: (2 marks each) **(6 Marks)**

Column A (Tool)	Column B (Function)
a. Task Manager	1. Configure hardware settings
b. Control Panel	2. Manage running processes
c. BIOS	3. System configuration and utilities

**05.** Match the file extensions with their file types: (2 marks each) **(6 Marks)**

Column A (Extension)	Column B (File Type)
a. .exe	1. Script file
b. .sh	2. Executable file
c. .log	3. Log file

**06.** Why is user account management important in system administration? **(4 Marks)**

- a. To allow users to install any software they want
- b. To maintain system performance during updates
- c. To ensure proper access control and system security
- d. To reduce internet bandwidth usage

**07.** What is the purpose of a **cron job** in a Unix/Linux system? **(4Marks)**

- a. To monitor real-time CPU usage
- b. To schedule and automate recurring tasks

- c. To install new system updates  
d. To back up database logs manually
- 08.** What is the main purpose of a firewall in system administration? **(4Marks)**
- a. To manage disk partitions  
b. To speed up CPU processing  
c. To control incoming and outgoing network traffic based on rules  
d. To clean temporary files from the system
- 09.** Why is **regular system backup** important in system administration? **(4Marks)**
- a. To increase system speed  
b. To allow multiple users to log in simultaneously  
c. To ensure data recovery in case of failure or loss  
d. To run batch files automatically
- 10.** Which command is used to create a new user in Linux? **(5Marks)**
- A) addgroup  
B) useradd  
C) newuser  
D) mkuser
- 11.** You want to schedule a daily backup at midnight on Linux. Which tool should you use? **(5Marks)**
- A) systemctl  
B) cron  
C) at  
D) bash
- 12.** Which Windows command displays network configuration details? **(5Marks)**
- A) ipshow  
B) configip  
C) ipconfig  
D) ifconfig
- 13.** To set file permissions in Linux, which command is used? **(5Marks)**
- A) chmod  
B) chown

- C) passwd  
D) setperm
- 14.** A user reports being unable to connect to the internet. **(5Marks)**  
You confirm the system has an IP but can't ping any external sites. What is the likely issue?  
A) Wrong IP address  
B) DNS misconfiguration  
C) Bad Ethernet cable  
D) Full hard disk
- 15.** You're analyzing high CPU usage on a Linux server. **(5Marks)**  
Which command would help to identify the cause?  
A) df  
B) top  
C) ls -la  
D) netstat
- 16.** A critical update caused system instability. What is the most effective analysis step? **(5Marks)**  
A) Delete all updates  
B) Reboot the system  
C) Check logs and rollback  
D) Reinstall the OS
- 17.** Two servers have different CPU and memory specs. You want to deploy a resource-intensive app. What do you evaluate first? **(5Marks)**  
A) User accounts  
B) Installed OS  
C) Hardware compatibility  
D) Network speed
- 18.** You notice frequent login attempts from unknown IPs. **(5Marks)**  
What's your best course of action?  
A) Restart the server  
B) Change the password  
C) Block IP and audit logs  
D) Ignore it
- 19.** You're reviewing two backup solutions: one offers speed but no encryption, and the other is slower but fully secure. Which is the better choice for sensitive data? **(5Marks)**  
A) The faster one to save time  
B) The encrypted one to ensure data confidentiality

- C) Both, used randomly
- D) Neither, since manual backups are better

**20.** You're asked to build a monitoring solution for 10 Linux servers. Which tool would you choose and why? **(5Marks)**

- A) MS Paint, because it's user-friendly
- B) LibreOffice Writer, because it can log reports
- C) Nagios or Zabbix, for real-time monitoring and alerts
- D) VLC Media Player, to visualize logs

**21.** You are creating a new user role on a Linux server with limited permissions to certain directories and applications. Which method would you use to ensure the most secure and least privileged access? **(5Marks)**

- A) Assign the user to the root group
- B) Create a specific user group and assign directory access via chmod and chown commands
- C) Grant the user full sudo access for administrative tasks
- D) Allow the user to manage other users on the system

**END**