



**ADVANCED LEVEL NATIONAL EXAMINATIONS, 2015,
TECHNICAL AND PROFESSIONAL TRADES**

EXAM TITLE: Operating System, Maintenance and Repair

OPTION: Computer Electronics (CEL)

DURATION: 3hours

INSTRUCTIONS:

The paper is composed of **three (3) Sections:**

Section **I:** Seventeen (**17**) questions, all **Compulsory.** **55marks**

Section **II:** Five (5) questions, **Choose Three (3) only.** **30marks**

Section **III:** Three (3) questions, **Choose only One (1).** **15marks**

- **Write clearly in full words all your answers.**

Every candidate is required to strictly obey the above instructions. Punishment measures will be applied to anyone who ignores these instructions.

Section I. Seventeen (17) Compulsory questions. 55marks

- 01.** UNIX is virtual memory operating system. Explain. **3marks**
- 02.** Define a command in UNIX. **2marks**
- 03.** Name two devices which are considered input devices. **2marks**
- 04.** What is a job in Linux? **3marks**
- 05.** Give the meaning of the following expressions:
- (a)** Chipset
 - (b)** 7-pin connector
 - (c)** Molex connector
 - (d)** Defragment the hard drive.
 - (e)** Isopropyl alcohol **15marks**
- 06.** Which two storage devices does a magnetic medium use for storing data? **2marks**
- 07.** How many character file names do MS-DOS operating system and UNIX allow? **2marks**
- 08.** Which two Windows utilities can be used to help maintain hard disks on computers that have had long periods of normal use? **2marks**
- 09.** What are two factors that must be considered when choosing a computer case? **3marks**
- 10.** Specify two activities that are controlled by the Northbridge part of the chipset. **3marks**
- 11.** What is the use of 24-pin connector? **3marks**
- 12.** Which tool in Windows XP gives a technician access to initialize disks and create partitions? **2marks**
- 13.** State two types of tools that can help to protect a computer from malicious attacks? **2marks**
- 14.** Where is the saved BIOS configuration data stored? **2marks**
- 15.** What is a function of the BIOS? **3marks**
- 16.** Why is it forbidden to work in low levels of humidity? **3marks**
- 17.** Why is documentation of all services and repairs an important organizational tool for a technician? **3marks**

Section II. Answer any three (3) questions of your choice

(Do not choose more than three questions). 30marks

- 18.** a) Provide two (2) devices that are connected to computer using parallel connectors.
b) Specify three (3) precautions that a technician should take to limit the risks of ESD affecting the workspace. **10marks**
- 19.** What is Direct Memory Access (DMA)? Describe clearly four (4) hardware systems that use it. **10marks**
- 20.** a. What is a hard disk?
b. Discuss different components of a hard disk. **10marks**
- 21.** Differentiate DIMM from SIMM. **10marks**
- 22.** Provide the functionality of the following commands: **10marks**

Command	Function
1. ps	
2. mv file1 file2	
3. date	
4. chmod 777	
5. du	

Section III. Answer any one (1) question of your choice

(Do not choose more than one question). 15marks

- 23.** Discuss at least 5 functions of an operating system. **15marks**
- 24.** Define a Deadlock. Discuss 4 conditions that can cause deadlock. **15marks**
- 25.** Explain four steps that most of CPUs use in their operation. **15marks**