

## **IBM – Advanced Diploma on IT, Networking and Cloud Computing Core Module – 01 (PRACTICAL)**

1. How do you safely disassemble a PC and identify the key components such as the motherboard, RAM, and power supply?
2. What are the steps to correctly reassemble a PC and ensure all components are properly connected?
3. How do you install a CPU into the motherboard and attach a cooling fan using thermal paste?
4. What is the correct procedure for installing and removing RAM from a motherboard?
5. How do you install a SATA hard drive into a desktop computer, and what precautions should you take with power and data connections?
6. What are the steps for installing a PCIe expansion card, such as a graphics card or network card, in a desktop PC?
7. How do you connect and test USB peripherals such as a keyboard, mouse, and USB drive on a PC?
8. What tools and steps are required to clean the internal components of a PC, especially the motherboard and fans?
9. What steps do you follow to troubleshoot and resolve hardware-related issues, such as a PC not powering on or failing to boot?
10. How do you create a bootable USB drive and use it to install Windows 10 on a desktop or laptop?
11. What is the process for installing Ubuntu Linux from a bootable USB drive, and how do you partition the hard drive during installation?
12. How do you set up a dual-boot system with both Windows and Linux on the same hard drive?
13. What steps are involved in downloading and installing device drivers after a fresh OS installation?
14. How do you access and configure BIOS settings to prepare a PC for an operating system installation, such as changing the boot order?
15. Create a pay slip using functions and formulae in a spreadsheet.
16. Create a script that asks the user for a number and determines if the number is odd or even in Linux.
17. Create a script that prompts the user for their age and prints a message based on the input:
  - A. If the age is less than 18, print "You are a minor."
  - B. If the age is between 18 and 60, print "You are an adult."
  - C. If the age is over 60, print "You are a senior citizen."

18. Write a script that performs the following tasks:
  - A. Creates a directory named 'ProjectFiles'.
  - B. Navigates into this directory.
  - C. Creates 5 empty text files named file1.txt to file5.txt.
  - D. Lists all files in the directory with their sizes.
19. Prepare a hard disk for OS installation by creating disk partitions. Explain the steps required to create at least 3 partitions.
20. How do you perform disk defragmentation on Windows? Describe the steps involved.
21. Solder electronic components onto a PCB. Describe the steps and precautions to ensure a proper solder joint.
22. Install Windows and Linux operating systems on two different partitions of the same hard drive. Describe the process.
23. Install and uninstall application software, such as Office, Multimedia players, or Antivirus programs.
24. Execute the following Linux commands: touch, echo, clear, ls, dir, mkdir, cat, rmdir, rm, cp, mv. Provide examples of each.
25. Create a magazine using columns, page borders, header, and footer in OpenOffice. Describe the formatting options available.
26. Create a marksheet in a spreadsheet with data validation, and create a chart to visualize the marks.
27. Execute the following Linux commands: find, head, tail, tar, gzip, bzip2, alias, sed, wc, sort. Provide a brief explanation of each command.
28. Create a file using the vim editor, write a paragraph in it, and copy the content to another file.
29. Remove the cabinet from a PC, identify the motherboard components, slots, sockets, and connectors, and remount them.
30. Prepare a hard disk for OS installation by creating disk partitions. Create at least 3 disk partitions and assign drive letters.
31. Install or uninstall application software (Office, multimedia, or antivirus) on a computer. Explain the steps.
32. Use the TTY command to find the terminal ID in Linux. Explain how to know which terminal you are working in.
33. Draw a house sketch using Microsoft Paint or a similar drawing tool.
34. Create your resume using document editing commands, including formatting and layout adjustments.
35. Create a purchase order using tables and images in Microsoft Word. Explain how to format the document.

36. Create a magazine in Microsoft Word or OpenOffice, using columns, page borders, headers, and footers.
37. Create an invitation letter using mail merge for multiple invitees in Microsoft Word or OpenOffice.
38. Create a marksheet using a spreadsheet with data validation, and generate a chart to display the data visually.
39. Create a pay slip using functions and formulae in a spreadsheet to calculate employee earnings.
40. Create a Pivot Table and chart in a spreadsheet for inventory management, and explain how to organize and visualize the data.
41. Create a presentation by inserting charts, tables, and images to illustrate the organizational structure of a company.



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