

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-VI

ASSIGNMENTS

(July - 2026 & January - 2027)

**(BCS-062, MCS-022,
BCSL-063)**



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068**

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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA Programme Guide.
3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the BCA Programme Guide.

Course Code	:	BCSL-063
Course Title	:	Operating System Networking Management Lab
Assignment Number	:	BCA(VI)/L-063/Assignment/2026-27
Maximum Marks	:	50
Weightage	:	25%
Last date of Submission	:	31st October, 2026 (For July 2026 Session)
	:	30th April, 2027 (For January 2027 Session)

Note: This assignment has five questions for a total of 40 marks. The rest 10 marks are for viva voce. For each question, you must write the required shell script or provide a step-by-step procedure with screenshots. Attach all scripts and screenshots with your assignment.

Q1: Shell Scripting - Linux/UNIX (8 Marks)

- (a) Write a shell script named `archive_logs.sh` that accepts a directory path and compresses only `.log` files into `logs_archive.tar.gz`. If no `.log` files exist, display an appropriate message.
- (b) Write a shell script named `disk_monitor.sh` that checks disk usage of the root (`/`) partition. If usage exceeds 80%, display a warning; otherwise display available free space.

Q2: Linux/UNIX Administration (8 Marks)

- (a) Create a user account named `trainee` with home directory `/home/trainee` and shell `/bin/bash`. Create a group named `support` and add `trainee` and `analyst` to it. Write the required commands with explanation.
- (b) Create a directory `/srv/projects`. Assign ownership to `analyst:support` and configure permissions so owner has `rwX`, group has `r-x` and others have no access.

Q3: Windows Server Administration (8 Marks)

- (a) Create a new Active Directory user: Full Name: Arjun Mehta, Logon Name: `arjun.m`. Force password change at next logon and add the user to the `HR` group.
- (b) Create a shared folder `D:\HRDocs` with share name `HR_Share`. Grant Full Control share permission to `HR` group, Modify NTFS permission to `HR` group and Full Control to Administrators. Provide step-by-step procedure with screenshots.

Q4: Network Configuration (8 Marks)

- (a) Configure a Windows network adapter with the following static settings: IP `10.10.20.15`, Subnet Mask `255.255.255.0`, Gateway `10.10.20.1`, Preferred DNS `1.1.1.1`. Explain with screenshots.
- (b) Install and configure a DHCP Server with scope `Campus_Network` having range `10.10.20.100–10.10.20.180`, subnet mask `255.255.255.0`, gateway `10.10.20.1` and DNS `1.1.1.1`. Activate the scope.

Q5: Linux/UNIX Commands

(8 Marks)

- (a) Display all lines containing the keyword 'failed' (case-insensitive) from /var/log/auth.log.
- (b) Display the PID of the sshd process.
- (c) Create a symbolic link named website in your home directory pointing to /opt/webapp.
- (d) Display memory usage in human-readable format.
- (e) Schedule /home/admin/cleanup.sh to execute every Friday at 11:30 PM using cron.