



ଓଡ଼ିଶା ରାଜ୍ୟ ମୁକ୍ତ ବିଶ୍ୱବିଦ୍ୟାଳୟ, ସମ୍ବଲପୁର, ଓଡ଼ିଶା
Odisha State Open University, Sambalpur, Odisha
Established by an Act of Government of Odisha.

DIPLOMA IN CYBER SECURITY (DCS)

ASSIGNMENTS

**DCS-01 to DCS-05
(Theory)**

SESSION: 2016-2017

Please read the instructions carefully before attempting assignment questions.

INSTRUCTIONS FOR DOING ASSIGNMENTS

Dear Learner,

You are required to submit one assignment per course within the stipulated time in order to become eligible to appear in the term-end examination. The assignments will be evaluated by the counselors at your Study Centre. Please submit your assignment solutions to the Coordinator of your Study Center.

Purpose of Assignments:

1. Assignments are part of the continuous evaluation process in Open and Distance Learning (ODL) system. Due weightage is given to the marks/grades you obtain in assignments. This will help you for better performance in the term-end examination. If you secure good grades/marks in assignments, your overall performance will improve.
2. Assignments are also a part of the teaching-learning process in ODL system. Your assignment, after evaluation, will be returned back to you with specific and general comments by the evaluator. This will help you to know your strength as well as your weakness. Thus, it will establish a two-way communication between learner and evaluator.

HOW TO WRITE ASSIGNMENTS:

Please read the instructions for writing the response of an assignment before you start writing your answer.

1. Write your name, programme code, course title, enrolment no. and study center name with code in the top sheet of the assignment answer booklet as per the format given below.

PROGRAMME TITLE:ENROLMENT No.:

NAME:

ADDRESS:.....

COURSECODE.....COURSE TITLE:.....

ASSIGNMENT CODE:SIGNATURE:

STUDY CENTRE:DATE:

2. Before you attempt the assignments, please go through the course materials carefully, understand the same and write answers in your own language and style.
3. Write the answers in your own handwriting. Give sufficient margin in the left side of each page so that the evaluator will give comments on each paragraph/page.
4. Your handwriting should be neat and readable.

WEIGHTAGE FOR EACH ASSIGNMENT:

1. Each assignment will carry 25% weightages and term-end examination will carry 75% weightage.
2. Each assignment will be of 100 marks. But it will carry 25% weightage.
3. You have to score minimum pass mark i.e. 40% in each assignment. In case you do not submit assignment or get fail mark in assignment you have to re-submit in the next year.

SUBMISSION DATES FOR ASSIGNMENTS

Sl.No.	Course Code	Name of the Course	Date of Submission	Day (as per Calendar)
SEMESTER - I				
1	DCS-01	Operating Systems Basics (Windows-7, Linux)	23 rd Oct.2016	Sunday
2	DCS-02	Data Communication and Networking	23 rd Oct.2016	Sunday
3	DCS-03	Information Security	30 th Oct.2016	Sunday
SEMESTER - II				
4	DCS-04	Application Cyber Security	23 rd April 2017	Sunday
5	DCS-05	Network Cyber Security	30 th April 2017	Sunday

DCS-01: OPERATING SYSTEM BASICS (100 MARKS)

PART-A

Long Type Questions

(40=20×2) Marks

1. Describe services in Windows.
2. Discuss the Linux File System Hierarchy.

PART-B

Medium Type Questions

(30=10×3) Marks

3. What is user management and how it is done in Linux?
4. Write and explain the different parts of windows.
5. How to manage compressed archives in Linux? Explain.

PART-C

Short type questions

(30=5×6) Marks

6. Write short notes on the following.
 - a) *ls* command
 - b) *cat* command
 - c) *touch* command
 - d) *man* command
 - e) *rm- rf* command
 - f) *rd* command

DCS-02 DATA COMMUNICATION AND NETWORKING

(100 MARKS)

PART-A

Long Answer Type Questions

(20×2=40) Marks

1. Discuss the functions of each layer of OSI reference model.
2. Discuss the features and scope of different categories of Networks: LAN, MAN and WAN.

PART-B

Medium Answer Type Questions

(10×3=30) Marks

3. Discuss the features, merits and demerits of Star, Bus and Ring topologies.
4. Explain the CSMA/CD algorithm for Ethernet. How it is different from CSMA/CA?
5. Briefly explain different types of switching networks and mention their advantages and disadvantages.

PART-C

Short Answer Type Questions

(5×6=30) Marks

6. Write short notes on the following.
 - a) WWW
 - b) FTP
 - c) SMTP
 - d) INTRANET
 - e) EMAIL
 - f) IPV4

DCS-03 –INFORMATION SECURITY (100 MARKS)

PART-A

Long Answer Type Questions

(20×2=40) Marks

1. Explain in detail the three important goals of Information Security.
2. What are different types of cyber crimes? What are different reasons for commission of cyber crimes?

PART-B

Medium Answer Type Questions

(10×3=30) Marks

3. Discuss different types of attacks on Confidentiality, Integrity and Availability.
4. Discuss in brief different generations of antivirus software and give example of each.
5. Discuss any two Substitution Techniques for encryption with examples and list their merits and demerits.

PART-C

Short Answer Type Questions

(5×6=30) Marks

6. Write short notes on the following.
 - a) Cyber Terrorism
 - b) Cryptanalysis
 - c) IDS
 - d) Trojan horses
 - e) Hacking
 - f) Asymmetric Key Cryptography

DCS-04 – APPLICATION CYBER SECURITY (100 MARKS)

PART-A

Long Answer Type Questions

(20×2=40) Marks

1. What do you mean by Cyber Law? Discuss the provisions of Information Security Act, 2000.
2. Discuss in detail different ways to ensure desktop security.

PART-B

Medium Answer Type Questions

(10×3=30) Marks

3. What do you mean by security of Operating System? What are the requirements of Secure Operating System?
4. What do you mean by Ethical Hacking? What is the role of an Ethical Hacker?
5. What is Security Audit? How it is done? Discuss.

PART-C

Short Answer Type Questions

(5×6=30) Marks

6. Write short notes on the following.
 - a) ISO 27001
 - b) Disaster Recovery
 - c) Database Security
 - d) Programming Bugs
 - e) Digital Signature
 - f) Computer Forensics

DCS-05 – NETWORK CYBER SECURITY (100 MARKS)

PART-A

Long Answer Type Questions

(20×2=40) Marks

1. Discuss the architecture of Network Security Model for transmission of secured information over the network.
2. What is Intrusion Detection System? How it is different from Intrusion Prevention System? Discuss different types of Intrusion Detection Systems.

PART-B

Medium Answer Type Questions

(10×3=30) Marks

3. What is a firewall? Discuss different types of firewalls.
4. Discuss security mechanisms and protocols of Email.
5. Explain the different wireless network components. How to secure a wireless network?

PART-C

Short Answer Type Questions

(5×6=30) Marks

6. Write short notes on the following.
 - a) Antivirus software
 - b) Mobile security
 - c) E-Commerce Security
 - d) SQL Injection
 - e) SMIME
 - f) Web Browser Security