ASSIGNMENTS

CSP- 10, 11 & 12
CSPL- 10, 11 & 12

(Theory & Practical)

SESSION: 2019-20

DIPLOMA IN CYBER SECURITY (DCS)

(1st Semester)

Sl.No.	CODE	COURSE TITLE	DATE OF SUBMISSION
1	CSP-10	Operating System Basics	Sunday, 24th May 2020
2	CSP-11	Data Communication & Networking	Sunday, 24th May 2020
3	CSP-12	Information Security	
PRACTICALS			
4	CSPL-10	Operating System Basics Lab	Sunday, 24th May 2020
5	CSPL-11	Data Communication & Networking Lab	Sunday, 24th May 2020
6	CSPL-12	Information Security Lab	

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 counsellors 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 the 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 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, the course title, enrolment no. and study centre 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 Assignments:

1. Each Theory Assignment will carry 15% weightage and each Practical Assignment will carry 10% weightage 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 the assignment or get fail mark in the assignment you have to re-submit in the next year.

ASSIGNMENTS
Operating System Basics (CSP-10)

Full Mark – 100

GROUP- 'A'

Q. No. 1 Answer all the questions, each in one word.   **Marks: 1 × 10= 10**

   a) What does USB Stand for?
   b) Name any two System Software.
   c) What does BIOS stand for?
   d) _____ operating systems are those systems that respond instantaneously to the input.
   e) Name the latest version of Windows OS.
   f) What is the Operating System?
   g) Who has developed the Linux Operating System?
   h) Linux is an Open Source Software. **True/False.**
   i) Name a text editor used in Linux.
   j) Write the Linux command to create a new folder.

Group 'B'

Q. No 2. Short answer-type Questions (Word Limit: 100 Words)   **Marks:5 X 4 = 20**

   a) What is a command-line interface?
   b) What is the utilization of memory device?
   c) Write down the steps, how the users can be managed in Windows?
   d) Show the steps for Copy a file from one directory to the other.

Group 'C'

Q. No 3. Medium answer-type Questions (Word Limit: 200 Words)   **Marks: 10 X 4 = 40**

   a) Write down the roles and responsibilities of an operating System Administrator.
   b) Discuss Domain, Workgroup, & Active Directory in Windows System.
   c) Write down the process of managing compressed archives with zip & tar.
   d) What is Linux? What are the various versions of Linux? Write the advantages of Linux?

Group 'D'

Q. No 4. Long answer-type Questions (Word Limit: 300 Words)   **Marks: 15 X 2 = 30**

   a) Differentiate between Windows & Linux with their features, advantages & disadvantages.
   b) Write & show the practical steps of syntax execution for any ten commands in Linux.

ASSIGNMENTS
Data Communication & Networking (CSP-11)

(Theory)

Full Mark – 100

GROUP- 'A'

Q. No. 1Answer all the questions, each in one word   **Marks: 1 × 10= 10**

a) What is the difference between Transmission and Communication?

b) What does MAN Stand for?

c) Define Simplex & Half Duplex with example.

d) The process of converting Analog data to Analog signal is known as _____.

e) Define Bandwidth.

f) Write down the advantage of Hybrid Topology?

g) What does TCP/IP Stand for?

h) Name the layers in the OSI Reference Model?

i) What is Firewall?

j) What does DNS stand for ____?

Group 'B'

Q. No 2. Short answer-type Questions (Word Limit: 100 Words)   **Marks:5 X 4 = 20**

a) Differentiate between Circuit Switching and Packet Switching?

b) Discuss different types of unguided media?

c) Define Briefly about IP and its protocols.

d) Differentiate between Synchronous and Asynchronous Transmission.

Group 'C'

Q. No 3. Medium answer-type Questions (Word Limit: 200 Words)   **Marks: 10 X 4 = 40**

a) What is Multiplexing? Explain different types of Multiplexing.

b) Define Sampling and Quantization.

c) What is a Router? What are its functions?

d) Classify the different line coding scheme with example?

Group 'D'

Q. No 4. Long answer-type Questions (Word Limit: 300 Words)   **Marks: 15 X 2 = 30**

a) Explain with diagram different types of Topology in Networking.

b) Explain briefly the layers of the OSI Reference Model.

ASSIGNMENTS
Information Security (CSP-12)
(Theory)

Full Mark – 100

GROUP- 'A'

Q. No. 1 Answer all the questions, each within on word or one sentences   Marks: 1 × 10= 10

a) Confidentiality, Integrity and _____ are the measure goals of Information Security?

b) _____ refers to obtaining some other type of information by monitoring.

c) What does MD5 Stand for?

d) _____ mechanism provides protection against unauthorized access to data.

e) The transformed message in Cryptography is called _____

f) Hackers may be classified into three types. What is that?

g) _____ Attacks cause our assets to become unusable or unavailable for our use, on a temporary or permanent basis.

h) DDoS Attacks Stands for_____.

i) "infects the boot sector or the master boot record or displaces the active boot sector of a hard drive" is an example of _____ Virus.

j) Which malicious program cannot do anything until actions are taken to activate the file attached by the malware.

Group 'B'

Q. No. 2 Short answer-type Questions (Word Limit: 100 Words)   Marks: 5 × 4= 20

a) Notes on Logic Bombs.

b) Notes on Data Encryption System (DES).

c) How Interruption is different from Interception?

d) List the reasons for the Commission of Cyber Crimes.

Group 'C'

Q. No. 3 Medium answer-type Questions (Word Limit: 200 Words)   Marks: 10 × 4= 40

a) What is hacking? Who is a hacker? Explain different ways of Hacking.

b) Differentiate between Passive Attacks and active attacks.

c) What is Play fair Cipher? Explain with an example.

d) What is Computer Virus? Explain how Computer Virus Works?

Group 'D'

Q. No. 4. Long answer-type Questions (Word Limit: 300 Words)   Marks: 15 × 2= 30

a) What is Cyber Crime? Explain the insider and External Attack in cyber-crime.

b) What is Computer Worm? Explain the different type of Computer Viruses.

ASSIGNMENTS
(PRACTICAL)

ASSIGNMENTS
Operating System Basics Lab (CSPL-10)

Full Mark – 100

Answer All the Questions (each question carries 20 marks)

1) Write and show the steps to install windows OS using bootable Pen drive.
2) Show and Write down the steps to create a bootable pen drive and installation process of Kali Linux.
3) Show and Write down the steps to create a user "**EXAM**" and set the password for the created user "**Exam**@123", then change the user type to Administrator in windows.
4) Show and Write down the steps on how to change the permission of a file from reading to write permission in Linux.
5) Show and write the steps for the following actions in Windows and Linux.

   For Linux:
   a)   Create a .txt file named "msclab.txt" using 'gedit' editor on the Desktop.
   b)   Create the following directory structure using the terminal.

   Desktop/OSOU/CS/EXAM/CSP-10

   c)   Copy the file from Desktop to a "users/OSOU/CS" folder using the terminal in Linux.
   d)   Create a file using vi editor and rename it to "clab.txt"
   e)   Change the file permission to 746.

   For Windows:
   a) Create a .txt file named "clab.txt" using cmd on the Desktop.
   b) Create the following directory structure. **Desktop/OSOU/CS/EXAM/CSP-10**
   c) Copy the file from Desktop to a "users/OSOU/CS" folder.
   d) Create a file using and rename it to "clab.txt"

ASSIGNMENTS
Data Communication and Networking Lab (CSPL-11)

Full Mark – 100

Answer All the Questions (each question carries 20 marks)

1. Explain how to perform sampling and quantization in networking.
2. Write the steps to Assigning an IP address to the PC and connect to the internet.
3. Write down the steps to set firewalls in Windows Operating System.
4. Write the steps on how to connect a network printer in Windows.
5. Describe the functions of the TCP/IP suite.

ASSIGNMENTS
Information Security Lab (CSPL-12)
(Practical)

Full Mark – 100

Answer All the Questions (each question carries 20 marks)

1. Write the procedure of Caesar Cipher Encryption Technique. Here is a plain text below. Encrypt and decrypt the below plain text using Caesar Cipher encryption, using a left shift of 16.

    Plain Text: Master of Science in Cyber Security

2. What is Information Security? Explain different prevention mechanism to protect one's PC from Hackers.

3. Perform encryption and decryption using the RSA algorithm, based on the following:

    Two Prime Number P=3 and Q=11;

    Public Key e=7; Plain text (N) =5

4. Perform encryption and decryption using the RSA algorithm, based on the following:

    Two Prime Number P=7 and Q=11;

    Public Key e=13; Plain text (N) =5

5. Given a plain-text message and a numeric key below. Perform encryption and decryption using Rail fence techniques.

    Plain Text: Virat Kohli is the current captain of the team across all formats of Cricket. **Key:** 3