



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

# ASSIGNMENTS

CSP-10, 11 & 12

(Theory & Practical)

SESSION: 2018-19

**PG DIPLOMA IN CYBER SECURITY  
&  
ADVANCE DIPLOMA IN CYBER  
SECURITY  
(PGDCS & ADCS)**

**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 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 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)
<b>Theory</b>				
1	CSP-10	Operating System Basics	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>
2	CSP-11	Data Communication & Networking	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>
3	CSP-12	Information Security	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>
<b>Practical</b>				
4	CSPL-10	Operating System Basics Lab	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>
5	CSPL-11	Data Communication & Networking Lab	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>
6	CSPL-12	Information Security Lab	<b>18<sup>th</sup> Nov 2018</b>	<b>Sunday</b>

# ASSIGNMENTS

## Operating System Basics (CSP-10)

(Theory)

Full Mark – 100

### GROUP-‘A’

#### Q. No. 1

Mark: 1 × 10= 10

- a) The basic architecture of computer was developed by
  - i) John Von neuman
  - ii) Charles Babbage
  - iii) garden Moore
  - iv) Blaise Pascal
- b) How many generations a computer can be classified?
  - i) 3
  - ii) 4
  - iii) 5
  - iv) 6
- c) Which one is not an input device?
  - i) Keyboard
  - ii) Mouse
  - iii) Printer
  - iv) Scanner
- d) Memories which can be read only are called \_\_\_\_\_.
  - i) RAM
  - ii) ROM
  - iii) DRAM
  - iv) Virtual Memory
- e) What is PCI?
  - i) A type of monitor
  - ii) a type of System Bus
  - iii) A kind if Graphics
  - iv) None of these
- f) VLSI stands for \_\_\_\_\_.
- g) Define System software.
- h) Define Real Time Operating System.
- i) Name any two distribution of Linux.
- j) What is /var directory in Linux.

### Group ‘B’

#### Q. No. 2 (Word Limit: 50 Words)

Mark: 5 × 4= 20

- a) How to shut down a Linux system? What is Halt and poweroff command in linux?
- b) How to change the password of a user in linux System. Explain with an example.
- c) How to show hidden files in Windows XP and Windows 2003 Explain with an example.
- d) Versions of MS-Windows Operating Systems for PCs

### Group ‘C’

#### Q. No. 3 (Word Limit: 200 Words)

Mark: 10 × 4= 40

- a) List 10 Linux command used in terminal mode with descriptions.
- b) Explain the Application of Computer in details.
- c) Notes on Operating System Administration.
- d) Explain the steps of windows installation.

### Group ‘D’

#### Q. No. 4 (Word Limit: 250 Words)

Mark: 15 × 2= 30

- a) Explain about the File permission in Linux in details.
- b) Explain how to Format a hard disk and loading Operating System.

# ASSIGNMENTS

## Data Communication & Networking (CSP-11)

**(Theory)**

**Full Mark – 100**

**GROUP-‘A’**

**Q. No. 1**

**Mark: 1 × 10= 10**

- a) Define data.
- b) Peak Amplitude?
- c) A wave has a frequency of 10 Hz. What will be its period (T)?
- d) Consider a digital Signal with 8 levels, how many bits are required per level?.
- e) Define BIT Rate.
- f) Routers operate at \_\_\_\_\_ of the OSI model, where they are responsible for forwarding packets between two or more networks.
- g) \_\_\_\_\_ is a tool that measures TCP and UDP bandwidth performance.
- h) Which \_\_\_\_\_ converts plaintext into cypher text in a bit-by-bit fashion.
- i) What is Firewall?
- j) \_\_\_\_\_ to protect the confidentiality of the organization’s most sensitive information.

**Group ‘B’**

**Q. No. 2 (Word Limit: 50 Words)**

**Mark: 5 × 4= 20**

- a) Difference between Switch and Hub.
- b) Advantage and disadvantage of twisted pair cable.
- c) What is modulation? What are its types?
- d) Notes on ARP and RARP.

**Group ‘C’**

**Q. No. 3 (Word Limit: 200 Words)**

**Mark: 10 × 4= 40**

- a) Explain the Advantage and disadvantage of Computer Networking.
- b) What is Network topology? What are its types explain with diagram.
- c) Difference between Guided and Unguided Media.
- d) What is multiplexing? Explain FDM and TDM.

**Group ‘D’**

**Q. No. 4 (Word Limit: 250 Words)**

**Mark: 15 × 2= 30**

- a) What is network? What are the different internetworking device available for Networking explain it with its advantage and disadvantages
- b) What is OSI Model? What are the different layer in OSI Model explain.

# ASSIGNMENTS

## Information Security (CSP-12)

**(Theory)**

**Full Mark – 100**

**GROUP-‘A’**

**Q. No. 1**

**Mark: 1 × 10= 10**

- a) Define Computer Security.
- b) What are the measure goals of Information security?
- c) What is Traffic Padding?
- d) What is cryptography?
- e) Differentiate between threat and attack.
- f) Trojan Horse is a \_\_\_\_\_
  - i) Virus
  - ii) malware
  - iii) worms
  - iv) none of these.
- i) What is Instant messaging worms?
- j) What is email Spoofing?

**Group ‘B’**

**Q. No. 2 (Word Limit: 50 Words)**

**Mark: 5 × 4= 20**

- a) What are the types of security attacks? Give a brief idea.
- b) What is the difference between passive and active attacks?
- c) Notes on steganography.
- d) Differentiate symmetric and asymmetric key Cryptography.

**Group ‘C’**

**Q. No. 3 (Word Limit: 200 Words)**

**Mark: 10 × 4= 40**

- a) What are the key challenges of Information Security?
- b) Explain the Network Security Model with diagram.
- c) What is web threats? Explain about different web threats.
- d) What is malware? How it is different from Virus? What are the different types of worms explain.

**Group ‘D’**

**Q. No. 4 (Word Limit: 250 Words)**

**Mark: 15 × 2= 30**

- a) What are the challenges of information security? Explain.
- b) Explain RSA Algorithm with a suitable example.

# **ASSIGNMENTS**

## **(PRACTICAL)**

# ASSIGNMENTS

## Operating System Basics Lab (CSPL-10)

**(Practical)**

**Full Mark – 100**

**Answer Any Five (each question carries 20 marks)**

1. Write down the steps to perform the following operation in Windows Operating System.
  - a. Create a folder in Windows
  - b. Create a file in notepad and save it under the newly created folder.
  - c. Copy a file to a another folder
  - d. Rename a folder
  - e. Hide the file and unhide the file
2. Write down the steps to format a hard disk and load Windows Operating System.
3. Write down the steps to configure IIS in Windows Operating System.
4. Write the Linux commands to perform the following.
  - a. Create a new directory
  - b. Create a file.
  - c. Add the execute permission to the file
  - d. Display the contents of a file
  - e. Delete a file.
5. Write down the steps to change user password in LINUX Operating System.
6. Explain the File system hierarchy in LINUX Operating System.
7. Explain different user management and group management commands used in Linux.



# ASSIGNMENTS

## Data Communication & Networking Lab (CSPL-11)

**(Practical)**

**Full Mark – 100**

*Answer Any Five (each question carries 20 marks)*

1. Explain how to convert Analog signal to Digital Signal with an example.
2. Differentiate Star and Ring topology with diagram.
3. What are the needs of Network Security?
4. Write down the steps to set Firewalls in Windows Operating System.
5. Write the steps to Assigning IP address to the PC and Connect to the computer.
6. Write the steps how to connect a network printer in Windows.
7. What are the different error detection methods in Data Link Layer?

# ASSIGNMENTS

## Information Security Lab (CSPL-12)

**(Practical)**

**Full Mark – 100**

*Answer Any Five (each question carries 20 marks)*

1. Define ethics. Mention at least five ethical issues.
2. What role can you play to stop cybercrimes? Explain.
3. Discuss the encryption and decryption of a message using Caesar cipher technique with example.
4. Explain Data encryption standard.
5. What are the different ways to avoid Software piracy?
6. What is computer virus? Define various type of virus.
7. Explain different categories of cybercrime.