

**CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)**

ASSIGNMENTS

(July - 2022 & January - 2023)

(CIT-001, CIT-002, CIT-003 and CITL-001)



**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 CIT Programme Guide.
3. To become eligible for appearing the Term End Practical Examination for the lab course CITL-001, 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 CIT Programme Guide.

Course Code	:	CIT-001
Course Title	:	Fundamentals of Computer Systems
Assignment Number	:	CIT/CIT-001/ASSIGN/2022-23
Maximum Marks	:	25
Last Dates for Submission	:	31st October, 2022 (For July Session) 15th April, 2023 (For January Session)

There are four questions in this assignment, which carry 25 marks. Answer all the questions. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the CIT Programme Guide. The examples, whenever asked to be given, should be different from those that are discussed in the corresponding course material.

Question 1:

- (a) What is a computer system? Explain briefly different application domains. **(2 marks)**
- (b) What are output devices? Briefly explain various types of printing devices. **(2 marks)**
- (c) What is database management system (DBMS)? Briefly explain different types of DBMS. **(2 marks)**

Question 2:

- (a) What is System Software? How System Software is different from Application Software. **(2 marks)**
- (b) What is a Flowchart? Explain different symbols used in Flowchart. Draw a Flowchart for finding the simple interest on a saving bank deposit. **(3 marks)**
- (c) Write a C program to find the area of a triangle. **(2 marks)**

Question 3:

- (a) Explain the following network devices: **(2 marks)**
 - i. Bridge
 - ii. Modem
 - ii. Gateway
 - iv. Router
- (b) What is network topology? Explain Tree and Star topology with the help of suitable diagrams. **(2 marks)**

Question 4:

- (a) Briefly explain the need for Information Security. **(2 marks)**
- (b) Explain different types of security threats in the computer network. **(2 marks)**
- (c) Briefly explain various types of social engineering. **(2 marks)**
- (d) What is encryption? Differentiate between symmetric encryption and public-key encryption. **(2 marks)**

Course Code	:	CIT-002
Course Title	:	Introduction to Information Technology
Assignment Number	:	CIT/CIT-002/ASSIGN/2022-23
Maximum Marks	:	25
Last Dates for Submission	:	31st October, 2022 (For July Session) 15th April, 2023 (For January Session)

There are four questions in this assignment. Answer all the questions. The examples, whenever asked to be given, should be different from those that are discussed in the corresponding course material.

Question 1: (Covers Block 1) (6 marks)

- Differentiate between the terms – data, information, knowledge and wisdom with the help of an example. Explain different types of information.
- What is digital divide? What are the reasons of digital divide? What are the measures to bridge the digital divide?
- What is a digital identity? What is meant by verification and revealing of identity? Does revealing digital entity can result in cybercrime? Explain this with the help of an example.

Question 2: (Covers Block 2) (2+1+2+2= 7marks)

- What are the different system of payments that can be used for e-Commerce? Explain the following giving their functions and usage – Digital Signature, Digital Certificate, SSL and Firewall.
- Differentiate between e-Commerce and e-Governance. List the objectives of e-Governance and e-Government.
- What are the technologies that can be used for e-learning? Explain the features of any four such tools.
- Explain the role of ICT in health education, diagnostic support system and medical transcription process.

Question 3: (Covers Block 3) (6 marks)

- Explain the role of testing in the process of MIS development. What are the different types of maintenance? Explain each type with the help of an example.
- Explain the following components of and MIS
 - Finance and Accounting
 - Manufacturing and logistics
- List the features of the following IT projects in India – AGMARKNET, COURTIS, Examination Result portal.

Question 4: (Covers Block 4)

(6 marks)

- (a) What are the requirements and specifications of embedded system? Explain with the help of an example. Explain the two hardware languages for embedded systems.

- (b) Explain the following in the context of HCI:
 - (i) Virtual Machine
 - (ii) Graphical User Interfaces
 - (iii) Hypertext and Hypermedia

- (c) Explain the goals of computer vision. Also explain the applications of computer vision:
 - (i) Video Surveillance
 - (ii) Biometric-based identification and face detection

Course Code : **CIT-003**
Course Title : **Web based Technologies and Multimedia Applications**
Assignment Number : **CIT/CIT-003/ASSIGN/2022-23**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2022 (For July Session)**
15th April, 2023 (For January Session)

There are two questions in this assignment which carry 25 marks. Answer all the questions. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the CIT Programme Guide. The examples, whenever asked to be given, should be different from those that are discussed in the corresponding course material.

Question 1:

Design a web page for a University from the perspective of a Student. Draw the web page on a paper. Explain the navigation also.

(13 Marks)

Question 2:

Propose a plan to develop a multimedia tutor titled “How to prepare for CIT-003 exam”. Also, indicate the latest tools along with versions that you want to use to implement the plan. Make assumptions, wherever needed.

(12 Marks)

Course Code : **CITL-001**
Course Title : **Laboratory Course**
Assignment Number : **CIT/CITL-001/ASSIGN/2022-23**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2022 (For July Session)**
15th April, 2023 (For January Session)

There are five questions in this assignment of 5marks each. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the CIT Programme Guide. Submit the screenshots also along with the coding and documentation.

Question 1:

Write a program in C language to check that a string entered by the user is Palindrome or not. **(5 Marks)**

Question 2:

Design and develop a simple website for *Online Stationery Shop*. Through this website various stationery items can be made available to a user. Different stationery items can be shown on the website. Users can see the stationery items and item price quoted by the stationery shop. Users' can fill his/her name, mobile number and email id, address for registering as the user on this website. Discounts can be given to the user who shopped from the stationary store for *amount* \geq *Rs.500*.

(5 Marks)

Question 3:

Write a Java program which accepts distance in kilo meters as input and displays its Miles equivalent, or vice versa, as per the choice of user. **(5 Marks)**

Question 4:

Create "*Employees Database*" using MS-Access. Make relevant assumptions for designing the database. **(5 Marks)**

Question 5:

Exhibit the use of *Mailings* tab in MS-Word, with the suitable example of your choice. **(5 Marks)**

Note: Make assumptions wherever necessary.