

**CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)**

ASSIGNMENTS

(July - 2023 & January - 2024)

(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/2023-24**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2023 (For July, 2023 Session)**
15th April, 2024 (For January, 2024 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 central processing unit (CPU) of computer system. **(4 marks)**
- (b) What is storage devices? Briefly explain the various types of storage devices. **(2 marks)**

Question 2:

- (a) What is Software? Explain job of operating system. **(3 marks)**
- (b) What is a Flowchart? How to draw Flowchart? Explain with the help of an example. **(3 marks)**
- (c) Write a C program for finding whether a given number is even or odd. **(2 marks)**

Question 3:

- (a) What is computer network? Write classification of networks with illustration. **(2Marks)**
- (b) Explain following network devices: **(2 marks)**
 - i. Bridge
 - ii. Repeater
 - ii. Switch
 - iv. Router
- (c) What is network topology? Explain star and mesh topology with the help of suitable diagrams. **(2 marks)**

Question 4:

- (a) Explain use of Firewall and Packet Filtering. **(3 marks)**
- (b) What is need of Network Security? Explain Integrity, Confidentiality and Availability in relation to Information Security. **(2 marks)**

Course Code	:	CIT-002
Course Title	:	Introduction to Information Technology
Assignment Number	:	CIT/CIT-002/ASSIGN/2023-24
Maximum Marks	:	25
Last Dates for Submission	:	31st October 2023 (For July, 2023 Session) 15th April 2024 (For January, 2024 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)

- (a) How information is obtained from Data? Explain with the help of an example. How is knowledge different from information? Explain the quality and value of information.
- (b) What is ICT? How is ICT useful in the present time? What is the digital divide and how it can be reduced?
- (c) Define the term digital identity. Why do you need digital identity in cyberspace? How can you verify digital identity? What are the different cyber crimes that can be committed if the digital identity of a person is revealed?

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

- (a) What is e-Commerce? What are its advantages and disadvantages? Explain the terms Digital Certificate and SSL in the context of eCommerce.
- (b) What is e-Governance? Explain the features of any two e-Governance projects in India.
- (c) What are the advantages of e-learning? Explain the features of any three interactive tools of e-learning.
- (d) List the applications of ICT in the health sector. Explain the features of any two of these applications.

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

- (a) List the modules that may be required to design an inventory management system. Explain different phases of MIS development.
- (b) Explain the following components of an MIS.
 - i) Purchasing
 - ii) Quality Control
- (c) List the features of the following IT projects in India – NICNET, ERNET.

Question 4: (Covers Block 4) (6 marks)

- (a) What are the basic components of an embedded system? Explain the classification of embedded systems.

- (b)** Explain the following in the context of HCI:
- (i) Controls in the context of GUI
 - (ii) Voice User Interfaces
 - (iii) Hypermedia
- (c)** What is Computer Vision? What are the technical challenges in the context of computer vision? Explain.

Course Code : **CIT-003**
Course Title : **Web based Technologies and Multimedia Applications**
Assignment Number : **CIT/CIT-003/ASSIGN/2023-24**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2023 (For July, 2023 Session)**
15th April, 2024 (For January, 2024 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: **(13 Marks)**

Design a web page which uses two frames, the left frame are further divided into two frames horizontally. The upper portion of left frame contains an image while the lower one has navigation titles. The right frame contains some text description of the titles on the navigation bar.

Question 2: **(12 Marks)**

IGNOU wants to deliver CIT programme in multimedia form. Propose a plan to develop a CIT block in multimedia form. Assume a section of a unit to be smallest entity. Then propose text, graphics, audio, video, animation required for that section. You can also think of linking several non-linear sections.

Course Code	:	CITL-001
Course Title	:	Laboratory Course
Assignment Number	:	CIT/CITL-001/ASSIGN/2023-24
Maximum Marks	:	25
Last Dates for Submission	:	31st October, 2023 (For July, 2023 Session)
	:	15th April, 2024 (For January, 2024 Session)

Note : There are five questions in this assignment of 5 marks 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, which accepts a text string from a user and prints its reverse order.

Question 2: Write a Java applet which converts metres into kilometres and centimetres as given by the user.

Question 3: Create a database in MS-Access for a hospital, which is having the following database fields :

- Doctor ID, Doctor Name, Consultation Fee, Specialization
- Patient ID, Patient Name, Age, Gender

Question 4: Write HTML code to display a webpage for a hospital and create a web form for taking online appointment of a doctor.

Question 5: a) Create an invitation card of your birthday party in MS-Word.
b) Exhibit the use of Mail merge in MS word, Choose an example of your choice

Note: Make assumptions wherever necessary.