CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)

ASSIGNMENTS

(July - 2024 & January - 2025)

(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/2024-25**
Maximum Marks	**:**	**25**
Last Dates for Submission	**:**	**31st October, 2024 (For July Session)** **15th April, 2025 (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 computer system? Explain major components of computer system. **(2 marks)**

(b) What is printing devices? Briefly explain the various types of printing devices. **(2 marks)**

(c) What is secondary memory? Explain capacity, density and speed of hard disk drive. **(2 marks)**

Question 2:

(a) What is Software? Differentiate between System Software and Application Software. **(2 marks)**

(b) What is a Flowchart? Explain different symbols used in Flowcharts. Draw a flowchart for finding the average marks of ten students in CIT-001 Assignment. **(3 marks)**

(c) Write a C program to find the smallest and largest number from a give list of ten numbers. **(2 marks)**

Question 3:

(a) What is computer network? Briefly explain any three network topologies. **(2 marks)**

(b) Differentiate between asynchronous and synchronous mode of data transmission **(2 marks)**

(c) Explain following network devices: **(2 marks)**

i. Bridge ii. Hub

ii. Switch iv. Router

Question 4:

(a) Briefly explain advantages and disadvantages of social networking. **(2 marks)**

(b) Explain need of security in information and communication system. Also list different security threats in computer network. **(2 marks)**

(c) What is computer virus? Explain how a computer system can be protected from computer virus. **(2 marks)**

Course Code	**:**	**CIT-002**
Course Title	**:**	**Introduction to Information Technology**
Assignment Number	**:**	**CIT/CIT-002/ASSIGN/2024-25**
Maximum Marks	**:**	**25**
Last Dates for Submission	**:**	**31st October 2024 (For July Session)** **15th April 2025 (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)

(a) Define the term Data, Information, Knowledge and Wisdom. How are they related to each other? Explain any two technologies that are used for storing data.

(b) List and explain the features of Traditional computer based technologies in the context of ICT. What is digital divide? What is the effect of digital divide on employment and development?

(c) What are the functions of digital identity? Explain with the help of an example. What are the different cyber crimes? How can the cyber crimes be prevented?

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

(a) What are different types of e-Commerce? Explain each with the help of an example. List any four systems of payments. Explain any one of these giving its advantages and disadvantages.

(b) What is e-Democracy? Compare e-Democracy with e-Government.

(c) Explain the features of any three media creation tools and any three interactive tools in the context of eLearning.

(d) Explain the use of ICT in maintaining online health records, and patient monitoring and Home care.

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

(a) List the phases of development of a MIS. List any 10 requirements for development of an Information System for a University.

(b) Explain the following components of an MIS.

i) Manufacturing and Logistics

ii) Finance and Accounting

(c) List the features of the following IT projects in India – AGMARKNET, ERNET.

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

(a) List the characteristics of an embedded system? Explain different types of embedded operating systems.

(b) Explain the following in the context of HCI:
(i) Optical Scanner, and Headphones (ii) Graphical User Interfaces (iii) Hypertext

(c) Explain the following in the context of Computer Vision:
(i) Image Processing
(ii) Pixel
(iii) Photogrammetry
(iv) Occlusion
(v) Illumination
(vi) Video Surveillance

Course Code	**:**	**CIT-003**
Course Title	**:**	**Web based Technologies and Multimedia Applications**
Assignment Number	**:**	**CIT/CIT-003/ASSIGN/2024-25**
Maximum Marks	**:**	**25**
Last Dates for Submission	**:**	**31st October, 2024 (For July Session)** **15th April, 2025 (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: **(13 marks)**

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

Question 2: **(12 marks)**

List atleast 12 latest multimedia tools. Indicate the version of each tool and the year of release. Write features of each tools. Prepare a comparative table.

Course Code	**:**	**CITL-001**
Course Title	**:**	**Laboratory Course**
Assignment Number	**:**	**CIT/CITL-001/ASSIGN/2024-25**
Maximum Marks	**:**	**25**
Last Dates for Submission	**:**	**31st October, 2024 (For July Session)**
	:	**15th April, 2025 (For January Session)**

There are five questions of 5 marks each in this assignment. 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 string from the user as input and prints the number of characters in it. **(5 marks)**

Question 2: Create "Student Database" using MS-Access. Make relevant assumptions for designing the database. **(5 marks)**

Question 3: Write a Java applet that accepts grams as input and displays its quintal, kilogram and milligram equivalent, as per the choice of user. **(5 marks)**

Question 4: Design and develop a simple website for a school. Provide a facility on the website for a student to complete his registration process. **(5 marks)**

Question 5: Exhibit the use of Mail merge in MS word, Choose an example of your choice. **(5 marks)**

Note: Make assumptions wherever necessary.