

**CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)**

ASSIGNMENTS

(July – 2020 & January - 2021)

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



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRAGANDHINATIONALOPENUNIVERSITY
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/ASSIGNMENT/2020-21
Maximum Marks	:	25
Last Dates for Submission	:	31st October, 2020 (For July 2020 Session) 15th April, 2021 (For January 2021 Session)

Note: 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 course material.

Question 1:

- (a) What is a computer system? Explain major components of a computer system. **(2 Marks)**
- (b) Briefly explain different types Input and Output devices. **(2 Marks)**
- (c) What is a secondary memory? Explain capacity, density and speed of hard disk drive. **(2 Marks)**

Question 2:

- (a) What is an Operating System? Explain the need of Operating System. **(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) Define a computer network? Briefly explain any three network topologies. **(3 Marks)**
- (b) Explain the use of following network devices: **(3 Marks)**
 - i) Switch
 - ii) Router
 - iii) Repeater

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/ASSIGNMENT/2020-21
Maximum Marks	:	25
Last Dates for Submission	:	31st October, 2020 (For July 2020Session) 15th April, 2021 (For January 2021 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: (6 Marks)

- How is data different to information? Explain how information can be generated from raw data, with the help of an example. What are the features of effective information?
- List the advantages of using ICT technologies. What is meant by digital divide? What are the possible impacts of digital divide? How can digital divide be bridged?
- List various types of computer crime. Can digital identity help in reducing computer crimes? Give reasons in support of your answer.

Question2: (2+1+2+2= 7 Marks)

- What are different types of e-commerce? Give one example for each type. What are the security issues relating to e-commerce? Suggest measures that can help in reducing security risks for online financial transactions.
- List different e-Governance applications. Explain the features of e-Governance applications. Explain the infrastructure requirements for an e-Governance system.
- What are the advantages of an e-learning system? Explain the features of any five technologies that can be used in the context of an e-learning system.
- Explain the role of ICT in Health education, patient monitoring and telemedicine.

Question 3: (6 Marks)

- Identify and list requirements for an inventory management system. Also identify the type of information that will be generated for different levels of management.
- Explain the following components of and MIS
 - Finance and accounting
 - Manufacturing and Logistics
- List the features of any five IT projects, which are already implemented in India.

Question 4:

(6 Marks)

- a) What is an embedded operating system? Explain the classification of embedded operating system. Explain the features of any one embedded system.

- b) Explain the purpose of the following in the context of HCI:
 - (i) Command line interfaces
 - (ii) Graphical user interfaces
 - (iii) Hypermedia
 - (iv) Any two output devices

- c) Explain various technical challenges in the context of computer vision. Also explain any one application of image processing.

Course Code : **CIT-003**
Course Title : **Web Based Technologies and MultiMedia Applications**
Assignment Number : **CIT/CIT-003/ASSIGNMENT/2020-21**
Maximum Marks : **25**
Last Dates for Submission : **31st October (For July 2020 Session)**
15th April, 2021 (For January 2021 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.

- Q1.** Design a web page for a College / University from the perspective of a Student. Draw the web page on a paper. Explain the navigation also. **(13 Marks)**
- Q2.** Propose a plan to develop a multimedia tutor titled “Introduction to Artificial Intelligence”. Also, indicate the latest tools along with versions that you want to use to implement the plan. Make assumptions, wherever needed. Use Internet to learn about Artificial Intelligence at introductory level. **(12 Marks)**

Course Code : **CITL-001**
Course Title : **Laboratory Course**
Assignment Number : **CIT/CITL-001/ASSIGNMENT/2020-21**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2020(For July 2020 Session)**
15th April, 2021 (For January 2021 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.

- Q1.** Write a program in C language using functions, which multiply any two matrices of size 3 x 3. User should input these matrices. **(5 Marks)**
- Q2.** Design and develop a simple website for online Grocery Store. Through this website various household products can be made available to a user, Different household products can be shown on the website. Any user can see the household products and household products price quoted by the grocery store. User can fill his/her name, mobile number and email id, address for registering as the user to this website. Discounts can be allocated to a user who shopped from the grocery store for amount \geq Rs.2000 **(5 Marks)**
- Q3.** Write a Java applet which accepts temperature in degrees as input and displays its Fahrenheit equivalent, or vice versa, as per the choice of user. **(5 Marks)**
- Q4.** Create “ Schools database” using MS-Access. Make relevant assumption for designing the Database. **(5 Marks)**
- Q5.** Exhibit the use of References tab in MS-Word, with the suitable example of your choice. **(5 Marks)**

Note: *Make assumptions wherever necessary.*