CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)

ASSIGNMENTS

(July - 2021 & January - 2022)

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

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THE PEOPLE'S
UNIVERSITY

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/2021-22**
Maximum Marks	:	**25**
Last Dates for Submission	:	**31st October, 2021 (For July Session)**
		15th April, 2022 (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 different components of computer system.
(2 marks)

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

(c) Briefly explain different types of computer memory. **(2 marks)**

Question 2:

(a) What is Software? Differentiate between System Software and Application Software. **(3 marks)**

(b) What is a Flowchart? Explain use of different symbols in drawing of Flowchart with the help of an example. **(3 marks)**

(c) Write a C program for finding the largest number among the four given numbers. **(2 marks)**

Question 3:

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

(b) Explain following network devices:
    i.   Bridge   ii. Hub
    ii.   Switch   iv. Router
(2 marks)

(c) What is network topology? Explain star and bus topology with the help of suitable diagrams. **(2 marks)**

Question 4:

(a) What is computer virus? Explain any two types of virus attack. **(3 marks)**

(b) What is need of Network Security? Explain its different elements of Network Security. **(2 marks)**

Course Code : **CIT-002**
Course Title : **Introduction to Information Technology**
Assignment Number : **CIT/CIT-002/ASSIGN/2021-22**
Maximum Marks : **25**
Last Dates for Submission : **31st October, 2021 (For July Session)**
15th April, 2022 (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) How is information different from knowledge? Explain how knowledge can be generated, with the help of an example. Define the terms - quality of information and value of information.

(b) What is meant by ICT? How has ICT impacted the life of people? Define the term digital divide. Explain the reasons of digital divide.

(c) Explain the term cyber space. What is the importance of having a digital entity? Explain the term cybercrime. How can you protect yourself from cybercrime?

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

(a) Define the term e-commerce. What are the different approaches of commerce over the Internet? What are the advantages of e-commerce to a business? What are the constraints and limitations of e-commerce? What measures would reduce security risks for performing online financial transactions?

(b) Explain different kinds of e-Governance. Define the Objectives of e-Democracy. List the measures that should be considered prior to going for e-Governance.

(c) List the features of an e-learning system. Explain the features of any five synchronous tools that can be used for e-learning. Also explain the need of SCORM for e-learning.

(d) Explain the role of ICT in online medical advice, public health and computer-assisted surgery.

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

(a) Explain different steps of SDLC with the help of an example. Also explain different kinds of maintenance of information systems.

(b) Explain the following components of and MIS
    i)   Inventory and Material management
    ii)   Quality Control

(c) What are the limitations of MIS? Explain the role of NICNET in various IT projects in India. List the features of any two current IT projects in India.

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

(a) Explain the components of an embedded system. Also list the basic characteristics of embedded systems. Explain the characteristics of an embedded operating system.

(b) Define the term Human Computer Interface (HCI). List the features of following devices in the context of HCI:

(i) Webcam　(ii) Optical Scanner (iii) Plotters　(iv) Printer

(c) Explain the use of computer vision in medical diagnostics. Also explain the following terms in the context of computer vision:

(i)　　Face detection　(ii) Illumination　　(iii) Photogrammetry (iv) Occlusion

Course Code	**:**	**CIT-003**
Course Title	**:**	**Web based Technologies and Multimedia Applications**
Assignment Number	**:**	**CIT/CIT-003/ASSIGN/2021-2022**
Maximum Marks	**:**	**25**
Last Dates for Submission	**:**	**31ˢᵗ October, 2021 (For July Session)**
		15ᵗʰ April, 2022 (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 Hospital from the perspective of a Patient. Draw the web page on a paper. Explain the navigation also.   **(13 Marks)**

Question 2:   Propose a plan to develop a multimedia tutor titled ″Staying safe during pandemic times″. 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/2021-22**
Maximum Marks	:	**25**
Last Dates for Submission	:	**31st October, 2021 (For July Session)**
		15th April, 2022 (For January Session)

There are two questions in this assignment. 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 C program which prompts the user with the following options at the command prompt: **(10 marks)**

1) Compare two numbers for the larger,
2) Test a number for prime or not.

After choosing the option program will ask user to enter any two integers and perform the operation as given in the options.

Question 2. Write a Java applet which accepts centimeters as input and displays its meters, millimeters equivalent, as per the choice of user. **(5 Marks)**

Question 3. Create "hospital database" using MS-Access. Make relevant assumption for designing the Database. **(5 Marks)**

Question 4. Exhibit the use of mail-merge, with the suitable example of your choice. **(5 Marks)**