CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)

ASSIGNMENTS

(July - 2019 & January - 2020)

(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/ASSIGNMENT/2019-20**
Maximum Marks   :   **25**
Last Dates for Submission :   **15th October, 2019 (For July 2019 Session)**
                              15th April, 2020 (For January 2020 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 corresponding course material.

Q1.

(a)   Explain Central Processing Unit (CPU) of computer system.   **(3)**

(b)   Briefly explain different input and output devices of computer system.   **(3)**

Q2.

(a)   What is computer virus? Explain how to protect computer from viruses.   **(2)**

(b)   What is a flowchart? Draw a flowchart to calculate the simple interest.   **(2)**

(c)   Briefly explain relational model. Also explain different types of entities.   **(2)**

Q3.

(a)   Write a c programme to check whether a given number is even or odd. If the number is even find its square.   **(2)**

(b)   What is computer network? Write classification of networks with illustration.
                                                                              (3)
(c)   Explain use of following: **(2)**
        i)   Star Topology
        ii) Bus Topology

Q4.

(a)   What is Information Security? Explain Integrity, Confidentiality and Availability in relation to Information Security.   **(2)**

(b)   Explain use of Firewall and Packet Filtering.   **(2)**

(c)   Explain different types of security problems/attacks in context of online processing and social networking.   **(2)**

Course Code	:	CIT-002
Course Title	:	Introduction to Information Technology
Assignment Number	:	CIT/CIT-002/ASSIGNMENT/2019-20
Maximum Marks	:	25
Last Dates for Submission	:	15th October, 2018 (For July 2019 Session)
		15th April, 2019 (For January 2020 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.

Q1: (Covers Block 1) (6)

a) What are the different types of Information? Explain each type with the help of an example. Also explain the concept of Value of Information with the help of an example.

b) List the features of various ICT technologies. What are the benefits and shortcomings of using ICT? Explain with the help of example situations.

c) What are the functions of digital identity? How is digital identity useful in cyber space? List the precautions you must take so that the risk of computer crimes is minimised.

Q2: (Covers Block 2) (2+2+2+1= 7)

a) What are the advantages and shortcomings of using e-commerce? Explain with the help of an example. List the functions that should be supported by a B2C e-commerce application. What is digital signature? How are they useful for e-business?

b) What measures are to be considered for e-Governance? Explain the work plan and infrastructure requirements for e-Governance with the help of an example.

c) Explain the features of interactive tools that can be used for e-learning. Why are e-learning standards needed? List and explain any two e-learning standards.

d) List the features that should be available in an expert system that may be used for health education.

Q3: (Covers Block 3) (6)

a) Identify and list requirements for an online Examination system.

b) Explain the functions of different types of information systems. Give one example of transaction processing system.

c) List the features of any five IT projects either implemented or being implemented in India.

Q4: (Covers Block 4) **(6)**

a) List and explain various components and characteristics of an Embedded system. Explain the role of VHDL in the context of Embedded systems.

b) Explain the purpose of the following in the context of HCI:
   (i) Hypertext   (ii) Voice User Interface   (iii) Virtual machine (iv) Controls

c) What are the technical challenges that may be faced by a Medical science related computer vision system? Also explain the requirements of such a system.

Course Code	:	CIT-003
Course Title	:	**Web Based Technologies and MultiMedia Applications**
Assignment Number	:	**CIT/CIT-003/ASSIGNMENT/2019-20**
Maximum Marks	:	**25**
Last Dates for Submission	:	**15th October, 2019 (For July 2019 Session)**
		15th April, 2020 (For January 2020 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 Indian Railways from the perspective of a Passenger. Draw the web page on a paper. Explain the navigation also. **(13)**

Q2. Propose a plan to develop a multimedia tutor titled "Applications of ICT". Also, indicate the latest tools along with versions that you want to use to implement the plan. Make assumptions, wherever needed. **(12)**

Course Code	:	**CITL-001**
Course Title	:	**Laboratory Course**
Assignment Number	:	**CIT/CITL-001/ASSIGNMENT/2019-20**
Maximum Marks	:	**25**
Last Dates for Submission	:	**15th October, 2019(For July 2019 Session)**
		15th April, 2020 (For January 2020 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.

Q1. Write a program in C language using functions, which add any two matrices of size 3*3. User should input these matrices. **(5)**

Q2. Design and develop a simple website for online education System. Through this website various course can be made available to a user, Different courses can be shown on the website. Any user can see the course and course fees quoted by company. User can fill his/her name, mobile number and email id, marks in X^{th} for registering the course. Course can be allocated to a user who has scored marks > 75% in their X^{th}. **(5)**

Q3. Write a Java applet which accepts centimeters as input and displays its meters, millimeters equivalent, as per the choice of user. **(5)**

Q4. Create "hospital database" using MC-Access. Make relevant assumption for designing the Database. **(5)**

Q5. Exhibit the use of mail-merge, with the suitable example of your choice. **(5)**

   Note: Make assumptions wherever necessary.