

**CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)**

ASSIGNMENTS

(July - 2017 & January - 2018)

(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/17
Maximum Marks	:	25
Last Dates for Submission	:	15th October, 2017 (For July Session) 15th April, 2018 (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 need of primary memory in computer system. (3 marks)
- (b) What are I/O devices? Briefly explain the various types of I/O devices. (3 marks)

Question 2:

- (a) What is database management system (DBMS)? Briefly explain different types of DBMS. (2 marks)
- (b) What is a Flowchart? Explain different symbols used in flowcharts. Draw a flowchart to find the average of three given numbers. (3 marks)
- (c) Write a C program for finding the square of a given number. (2 marks)

Question 3:

- (a) What is data transmission? Briefly explain different modes of data transmission. (3 marks)
- (b) What is network topology? Explain advantages of Bus, Ring, and Star network topologies. (3 marks)

Question 4:

- (a) What is need of Information Security? Briefly explain any three types of security measures. (2marks)
- (b) What is encryption? Differentiate between symmetric encryption and public-key encryption. (2 marks)
- (c) Explain various types of social engineering. (2 marks)

Course Code : **CIT-002**
Course Title : **Introduction to Information Technology**
Assignment Number : **CIT/CIT-002/ASSIGN/17**
Maximum Marks : **25**
Last Dates for Submission : **15th October, 2017 (For July Session)**
15th April, 2018 (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)

- (i) What are different types of information? What are the uses of these different types of information? Define the terms quality of information and value of information. List different types of information that can be generated in a University.
- (ii) Describe any three technologies used as ICT. What is digital divide? How can it be reduced?
- (iii) What are the functions that must be served by a digital identity system? Also list and explain cyber and computer crimes.

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

- a) Explain any two systems of payments that can be implemented on e-commerce websites? List their advantages and issues.
- b) Explain the differences in objectives of e-Governance and e-Democracy?
- c) What is e-learning? Describe standards for e-learning environment. List four websites that are using e-learning to impart education.
- d) What are the uses of expert systems in Health care? Explain how expert systems can be applied in medicine domain.

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

- a) Identify and list requirements for examination and result declaration system of a University like IGNOU.
- b) What are the different types of Information Systems? Briefly explain each of these types.
- c) What is ERNET? List the features of any two projects implemented or being implemented on ERNET.

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

- a) What are the various hardware and software components of an embedded system? Explain with the help of a diagram.
- b) List the features of any four Controls that are used in GUI based software of a computer system.
- c) Explain the following terms in the context of Computer vision – Pixel, Intensity, Image processing, Diffused light source, Photogrammetry and Focus.

Course Code : **CIT-003**
Course Title : **Web based Technologies and Multimedia Applications**
Assignment Number : **CIT/CIT-003/ASSIGN/17**
Maximum Marks : **25**
Last Dates for Submission : **15th October, 2017 (For July Session)**
15th April, 2018 (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 University from the perspective of a University. Draw the web page on a paper. Explain the navigation also.
(13 Marks)

Question 2: Propose a plan to develop a multimedia tutor titled “Latest advances in Multimedia”. Also, indicate the tools 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/2017-18**
Maximum Marks : **25**
Last Dates for Submission : **15th October, 2017 (For July 2017 Session)**
15th April, 2018 (For January 2018 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.

1. Write a C program using function to find whether a number is a sum of two prime numbers or not. A function need to be designed for finding a prime number. *(10 marks)*

2. Design and develop a simple website for Online Auction System. Through this website product can be sold-out to a user, who can quote the maximum amount for any product. Different products can be shown on the website. Any user can see the product and earlier amount quoted by other users. New user can fill his/her name, mobile number and new amount quoted for that product. Product can be allocated to a user who has quoted the highest amount each day for a product. *(15 marks)*

Note: Make assumptions wherever necessary.