

**CERTIFICATE
IN
INFORMATION TECHNOLOGY
(CIT)**

ASSIGNMENTS

(July - 2016 & January - 2017)

(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/16-17**
Maximum Marks : **25**
Last Dates for Submission : **15th October, 2016 (For July 2016 Session)**
15th April, 2017 (For January 2017 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, and should be different from those that are discussed in the corresponding course material.

1. (a) What is CPU? Explain different components of CPU of a PC. (2 Marks)
- (b) Explain different types of main memory of a computer. (2 Marks)
- (c) Explain different types of software with example. (2 Marks)
2. (a) What is database management system (DBMS)? Briefly explain different types of DBMS. (2 Marks)
- (b) What is a flowchart? Explain the guidelines used for drawing flowcharts. Draw a flowchart to find the area of a circle. (3 Marks)
- (c) Write a C program to find average of the four given numbers. (2 Marks)
3. (a) Explain asynchronous and synchronous mode of data transmission. (1 Marks)
- (b) Explain following network devices: (2 Marks)
 - (a) Bridge
 - (b) Hub
 - (c) Switch
 - (d) Router
- (c) What is network topology? Explain star and bus topology with the help of suitable diagrams. (3 Marks)
4. (a) What is information security? Explain different aspects of information security. (2 Marks)
- (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/16-17
Maximum Marks	:	25
Last Dates for Submission	:	15th October, 2016 (For July 2016 Session) 15th April, 2017 (For January 2017 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) Explain different kinds/categories of information system. In what category/categories will you classify a Banking System? Justify your answer.
- (b) What is ICT? What are its benefits? List uses of ICT in education.
- (c) Define the term Digital identity. What is the need of digital identity? What is identity theft in this context?

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

- (a) An e-commerce site is to be designed for selling computer accessories like RAM, Disks, Pen drives etc. Suggest the features that should be supported by this website. What are the major security concerns for this website?
- (b) How can e-Governance be useful to us? Explain with the help of an example.
- (c) Explain the benefits of e-learning. Also explain the technologies that are used for e-learning.
- (d) What role ICT can play for Health care? Explain with the help of an example.

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

- (a) Identify and list requirements for an examination system of a University like IGNOU.
- (b) Explain the role of Inventory & Material management; and Finance & Accounting components of MIS. How are they related?
- (c) What is NICNET? List the features of any two projects implemented on NICNET.

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

- (a) What is an embedded system? What are VHDL and Verilog?
- (b) List the features of any four input devices of a computer system.
- (c) Explain any two applications of Computer vision.

Course Code : **CIT-003**
Course Title : **Web based Technologies and Multimedia Applications**
Assignment Number : **CIT/CIT-003/ASSIGN/16-17**
Maximum Marks : **25**
Last Dates for Submission : **15th October, 2016 (For July 2016 Session)**
15th April, 2017 (For January 2017 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.

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)*

2. Propose a plan to develop a multimedia tutor titled “Introduction to Computers”. 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/16-17
Maximum Marks	:	25
Last Dates for Submission	:	15th October, 2016 (For July 2016 Session) 15th April, 2017 (For January 2017 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 which prompts the user with the following options at the command prompt: *(10 marks)*

- 1) Add two numbers,
- 2) Compare two numbers for the larger,
- 3) 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.

2. Design and develop a website to display the details of a library which has books, Journals, magazines and CDs. It should contain appropriate details and links for authors, text books, journals, magazines, CDs, etc. *(15 marks)*

It should have a login page and registration page for members and new users respectively. This website can help users to issue books/and other material from the library and maintain their records and can also checks how many items are issued and stock available in the library. Add feature of late fine of library member who return the issued item after the due date.

Note: Make assumptions wherever necessary.