

# UNIVERSITY CENTRE FOR DISTANCE LEARNING (CDLU) SIRSA

BCA-1<sup>st</sup> year

Fundamentals of I.T. (101)

## ASSIGNMENT-1

Attempt any five questions. All questions carry equal marks.

Max Marks: 15

- Q1. What do you mean by Information Technology? Explain BCD codes.
- Q2. Explain binary and octal number system with the help of example.
- Q3. Discuss the components of computer using block diagram.
- Q4. Define the following: i) LAN ii) MAN iii) WAN
- Q5. Explain the following topology: i) Ring ii) Mesh iii) Hybrid
- Q6. Differentiate between DRAM and SRAM.
- Q7. Explain Floppy drive and CD/DVD drive in detail.
- Q8. What do you mean by secondary memory? Define its characteristics also.
- Q9. Discuss the various input devices.
- Q10. Explain the following: i) Printer ii) touch panel iii) joystick

## ASSIGNMENT-2

Attempt any five questions. All questions carry equal marks.

Max Marks: 15

- Q1. Explain the procedure of converting hexadecimal to decimal with the help of example.
- Q2. Explain fixed and floating point representation of a number in computer system.
- Q3. What do you mean by topology? Differentiate internet and intranet.
- Q4. Discuss the various types of computers.
- Q5. What is cache memory? Explain its organization also.
- Q6. What is need of memory hierarchy?
- Q7. What is flash memory?
- Q8. Explain the following: i) plotter ii) web camera iii) Light Pen
- Q9. Explain different components of hard disk with the help of diagram.
- Q10. Define the following terms: i) Card reader ii) Star topology iii) Modem

**BCA-1<sup>st</sup> year**

**PC SOFTWARE (102)**

**ASSIGNMENT 1**

**Attempt any five questions. All questions carry equal marks.**

**Max Marks: 15**

1. Explain the various generations of computer.
2. What is an operating system? Explain the applications of operating system.
3. Explain the classification of computer.
4. Explain the process of adding and deleting slides in Power point.
5. What is the use of control panel in MS-Windows? Write down at least two features of Control panel.
6. What is word processing? Explain the advantages of Word processing.
7. Describe different types of view available in power point.
8. Write the steps to create watermark on a page.
9. Explain the type of charts used in MS-Excel.
10. Differentiate between: i) star and ring topology ii) internet & intranet

**ASSIGNMENT 2**

**Attempt any five questions. All questions carry equal marks.**

**Max Marks: 15**

1. Explain the following functions in MS-Excel: i) IF ii) COUNT iii) COUNTA
2. Differentiate Animations & Designs with their effects in MS-PowerPoint.
3. Explain the different types of views in MS-Word.
4. Explain Home, insert, Animations, Slideshow in MS-power point?
5. What is mail-Merge? Explain with steps.
6. Write the steps to insert Header and footers in MS-Word.
7. Define Spreadsheet in MS-Excel. What are the different parts of spreadsheet?
8. How to Configure DOS? Explain the parameters of its commands with syntax.
9. Describe the various editing tools of Word. What are the various shortcuts attached to editing tools?
10. Discuss the organization of computer.

**BCA-1<sup>st</sup>year**

**PROGRAMMING FUNDAMENTALS USING C (103)**

**ASSIGNMENT-1**

**Attempt any five questions. All questions carry equal marks. Max Marks: 15**

1. Discuss problem solving techniques.
2. What is structured programming .Explain with example?
3. Write an algorithm for bubble sort technique?
- 4.Explain the standard library string function.
5. Define the various types of operators.
6. What are control statements? Explain with examples.
7. What is a function? Discuss the parameter passing mechanisms.
8. State the differences between structure and union.
9. Explain the data types supported by C.
10. Write a program for Quick sort.

**ASSIGNMENT -2**

**Attempt any five questions. All questions carry equal marks.**

**Max Marks: 15**

1. Discuss advantages of top down and bottom up programming with example.
2. Differentiate: i). gets () and puts ()                      ii) getch () and getche ()
3. What is recursive function? Explain.
4. Discuss the hierarchy of operators and also their associativity.
- 5 Describe the use of goto, Continue and Break statements.
6. Write a program for binary search.
7. Differentiate between Linear search and Binary search.
8. State the difference between pointer to arrays and array to pointers with example.
9. Explain the type of errors in C language.
10. Discuss the formatted and unformatted I/O statements.

BCA-1<sup>st</sup> year

MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE (104)

ASSIGNMENT-1

Attempt any five questions. All questions carry equal marks.

Max Marks: 15

1. Find the addition of matrices

$$4 \begin{pmatrix} 9 \\ 2 \\ 3 \\ -6 \end{pmatrix} + 5 \begin{pmatrix} 6 \\ -8 \\ -6 \\ -2 \end{pmatrix}$$

2. Find the inverse of matrix

$$\begin{pmatrix} 3 & 5 \\ -6 & -2 \end{pmatrix}$$

3.  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ ,  $A = \{2, 4, 6, 8, 10\}$ ,  $B = \{1, 3, 6, 7, 8\}$ ,  $C = \{3, 7\}$  Using Venn diagram, list the elements in each of the following:  $A \cup B$ ,  $A \cup C$ ,  $A' \cap B'$ .

4. Let  $A = \{1, 2, 3, 4\}$  and  $R = \{(1, 1), (1, 3), (2, 2), (2, 4), (3, 1), (3, 3), (4, 2), (4, 4)\}$  Show that  $R$  is an equivalence relation.

5. Explain various type of function.

6. How many 3 digit numbers can be made using the digits 1, 2 and 3 without repetitions?

7. Let  $A = \{6, 7, 8, 9\}$  find the power set  $P(A)$ .

8.  $A = \{2, 8, 1\}$  and  $B = \{4, 3, 1\}$ . Find the Cartesian product  $A \times B$ .

ASSIGNMENT-2

Attempt any five questions. All questions carry equal marks.

Max Marks: 15

1. Discuss the following matrices with example: i) identity ii) transpose iii) multiplication.

2. Find the inverse of  $A = \begin{pmatrix} 1 & 2 & 5 \\ 2 & 3 & 1 \\ -1 & 1 & 1 \end{pmatrix}$  and verify that  $A^{-1}A = I_3$ .

3.  $A = \begin{pmatrix} 6 & 7 \\ 4 & 8 \end{pmatrix}$   $B = \begin{pmatrix} 5 & 2 \\ 3 & 1 \end{pmatrix}$  Find  $A \cdot B$  and  $B \cdot A$

4. Prove that  $f: \mathbb{R} \rightarrow \mathbb{R}$ , defined by  $f(x) = x^3$  is one-one onto.

5. Explain the following terms: i) Reflexive relation ii) Symmetric relation iii) Anti-Symmetric relation

6.  $A = \begin{pmatrix} 4 & 2 & 1 \\ 6 & 7 & 1 \end{pmatrix}$  Find transpose of  $A$ .

7. Five people are in a club and three are going to be in the planning committee. Determine how many different ways this committee can be created.

**BCA-1<sup>st</sup> year**

**INTERNET AND WEB DESIGNING (105)**

**ASSIGNMENT-1**

**Attempt any five questions. All questions carry equal marks.**

**Max Marks: 15**

1. Discuss advantages and disadvantages of E-mail.
2. What are the components of email address?
3. How do you compose the message? What are components of the message?
4. What is an internet? What are the modes of connecting to internet?
5. Differentiate among newsgroups, mailing lists and Chat rooms.
6. What is DNS? Explain DNS hierarchy.
7. Explain the working of search engines and also name five popular search engines.
8. Difference between telnet and FTP?
9. What is a firewall? How does it work?
10. What is the structure of HTML page? How do you create hyperlinks in a web page?

**ASSIGNMENT-2**

**Attempt any five questions. All questions carry equal marks.**

**Max Marks: 15**

1. How do you compose an E-mail? Write a short note on E-mail management.
2. Write a short note on ISP.
3. Explain the following tags:  
<a>, <marquee>, <hr>, <table>, <s>, <font>
4. Write short note on collaborative computing & internet.
5. What do you mean by encryption? Explain different encryption schemes.
6. What is digital signature? Explain.
7. What is network? Explain various topologies of network design.
8. Differentiate b/w Directories search engines and Meta search engines with example.
9. Write some features of java script language.
10. Explain IPv6.