

Sai Nath University

Assignment For BCA 1st Sem.

The Assignment will consist of two parts, A and B. Part A will have 5 short answer questions(40-60 words) of 4 marks each. Part B will have 4 long answer questions of 10 marks each.

All questions are compulsory.

These Assignments should be completed and submitted in written form by the student to his/her respective Faculty/ Examiners. Assignment Submission Dates are:

➤ **Nov-17**

List Of Suggested Questions

The list of suggested questions is for students to practice. Although optional, we recommend that students solve these questions, as they will help them in preparing for exams as well as in clearing the important concepts of the subject.

List of Practical and suggested practical's

The list of practical's should be done by the students in their Lab Sessions. These are the basic practical's, which each student should be able to do himself independently. While the list of suggested practicals are optional, but it is recommended that students should perform those practical so as to have a thorough knowledge of the subject

Education Delivery Schedule (EDS)

As per University Semester scheme, the minimum contact hours of each paper has been Divided into two hours theory and practical class.

The faculty will maintain this attendance paper wise for his/her batch.

Subject Code	Subject Name
BCA 110	GENERAL ENGLISH
BCA 120	Fundamentals of Computers & C Language
BCA 130	Mathematics
BCA 140	PC Software
BCA 150	Practical

SAI NATH UNIVERSITY

Cover page of Assignment

ID NUMBER
NAME
COURSE	BCA.....
STREAM
SEM	1 ST
SUBJECT CODE
SUBJECT NAME

Assignments will be completed by the Student in his/her own handwriting.

BCA -110
GENERAL ENGLISH

Part A

1. What is professionalism? Define with an example?
2. What are different barriers to communications?
3. What are psychological barriers?
4. What is premature Evaluation?
5. What are the seven Cs of Professionalism?

Part B

1. What are the ways by which we can remove noise in the communication?
2. What are the different ways by which we can reduce our hesitation of speaking?
3. Discuss various tips required to be considered while drafting a brochure
4. Explain in detail the types of reading.

BCA -120
Fundamentals of Computers & C Language
Part A

1. Differentiate between Dos, UNIX and Windows.
2. Discuss the concept of Operating system. What are the various functions performed by an operating system?

3. Explain the flowchart.
4. Compare the array, structure and union.
5. Write a C Program to print the following output using nested loops.

```

      1
    1 2
  1 2 3
1 2 3 4
1 2 3 4 5

```

Part B

1. Write a C program to find the sum of the series:

$$s = 1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^n}{n!}$$

2. Explain about the different parameter passing methods with examples.
3. Write the C code to multiply two matrices.
4. Explain the various types of software's with suitable examples.

BCA 130 MATHEMATICS Part A

1. If $U = \{1, 2, 4, 5, 6, 7, 8\}$ and $A = \{2, 4, 6, 8\}$ find the A' .
2. If A and B are two sets such that $n(A) = 27$, $n(B) = 35$ and $n(A \cup B) = 50$, find $n(A \cap B)$.

3. If $A=\{3,4,5,6\}$ and $B=\{4,6,8,10\}$, find $A \cup B$.
4. Let $A=\{1,3,5,7,9\}$ and $B=\{2,3,5,7,11,13\}$. Find $A \cap B$.
5. Let $f(x)=x^2$ $g(x)=(3x+2)$ be real functions.
 - i. $(f+g)(x)$
 - ii. $(f-g)(x)$
 - iii. $(fg)(x)$
 - iv. $(f/g)(x)$

Part B

1. SOLVE THE QUESTION:

A. Evaluate $\lim_{x \rightarrow 0} \frac{\sin 2x}{x}$

B. Evaluate $\lim_{x \rightarrow 0} \frac{1 - \cos x}{x^2}$

2. Differentiate $\frac{(3x^2+2x+5)}{\sqrt{x}}$

If $y = \sqrt{1 - \cos 2x} / (1 + \cos 2x)$

(a) Find the first and second partial derivative of $z = x^3 + y^3 - 3axy$

(b) $\int_0^a \frac{x^7}{\sqrt{a-x^2}} dx$

3. SOLVE THE QUESTION:

Find the area of a plate in the form of a quadrant of the ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

Show that the area between the parabola $y^2 = 4ax$ and $x^2 = 4ay$ is $\frac{16}{3}a^2$.

4. SOLVE THE QUESTION:

a. Find x, y, z and w given that

$$3 \begin{vmatrix} x & y \\ z & w \end{vmatrix} = \begin{vmatrix} x & 5 \\ -1 & 2w \end{vmatrix} + \begin{vmatrix} 6 & x+y \\ z+w & 5 \end{vmatrix}$$

- b. If $A = \begin{bmatrix} 3 & 2 & 2 \\ 1 & 3 & 1 \\ 5 & 3 & 4 \end{bmatrix}$ find the matrix B such that $AB = \begin{bmatrix} 3 & 4 & 2 \\ 1 & 6 & 1 \\ 5 & 6 & 4 \end{bmatrix}$
- i. Let $A = \{1, 2, 3\}$ and $B = \{2, 4, 6\}$. Show that $R = \{(1, 2), (3, 2), (3, 4)\}$ is a relation from A to B. find
- ii. (i)dom R(ii)codomain R(iii)range R

BCA-140
PC SOFTWARE
Part A

1. Explain the structure of a computer with the help of a diagram.
2. Explain the concepts of multiprogramming with the help of a diagram.
3. Explain the characteristics of Twisted pair cables and Fiber optic cables in the context of communication channels.
4. Explain the concepts of Cryptography and Cryptanalysis.
5. Explain the concepts of datatype, array and expressions, with the help of an example of each, in the context of a programming language.

Part B

1. Compare and contrast the following :
 - a. Local Area Network vs Wide Area Network
 - b. Compiler vs Interpreter
 - c. Circuit switching vs Packet switching

- d. Star topology vs Bus topology
2. Create a macro that can run using "CTRL + B" key. The macro should make the selected portion of the document bold and italic.
3. Create five slides using MS-PowerPoint to explain the need of cleanliness in life. Use proper layouts, colours and images to make the presentation effective.
4. WRITE ALL QUESTION:
 - a. What is the basic procedure for creating a new document in MS-Word ? Why do you need to save a document ? Explain.
 - b. What are the advantages and disadvantages of CD-ROM as an external storage memory ?

BCA150 PRACTICAL Part A

1. Show the list of resources that are available in your PC. Using MS Window.
2. Uninstall a printer from your PC. Using MS Window.
3. Create a folder inside another folder and make it sharable. Using MS Window
4. Create a document with two level list. Using MS Window.
5. Write a paragraph about your favourite location. Format it with proper font size and colour. Using MS Window.

Part B

1. Create five slides using MS-PowerPoint about the need of a medicine shop in a locality. Use proper layouts, formatting, colours and images to make your presentation effective.
2. Create a macro using MS-Word that can be run using "CTRL + G" key. This macro should change font size to 20 pt and font type to "Times New Roman".
3. Create a data file containing names and addresses of students. Create a letter to inform them about convocation date and registration process to attend the convocation. Use Mail Merge feature of MS-Word to create a letter for all the students.
4. Create a macro that can run using "CTRL + B" key. The macro should make the selected portion of the document bold and italic.