



BCA Part-1 Examination, 2007 Computer Fundamentals

Time allowed: Three Hours
Maximum Marks: 50

Attempt any five questions. All questions carry equal marks.

1. (a) What are the advantages of computers? Explain with examples the major applications of computers.
(b) What are the main characteristics of a digital computer?
2. (a) Describe the characteristics of first and second generation computers.
(b) What are the limitations of computer?
3. (a) Explain the functioning of optical marks reader and optical scanner.
(b) Discuss with advantages and disadvantages of the utility of DIGITIZER and TRACKBALL.
4. (a) What are function and characteristics of a printer?
(b) What do you mean by an impact and non Impact printers? Compare these two types of printers.
5. (a) Describe the structure of magnetic disk unit. State the advantages and disadvantages of magnetic disk over magnetic tape.
(b) What do you mean by optical memory devices? Discuss any two of them.
6. (a) What is truth table? If A, B and C are binary digits, then give the truth table of the following:
 - i. $AB + \overline{AB}$
 - ii. $A \dots B + B + C$(b) Give the Boolean algebra representation and logic circuit of input XOR gate with its truth table.
7. (a) What is a decoder? Give the logic circuit and the truth table of a 8-bit decoder.
(b) What is a half adder? What purpose does it server? Draw the logic circuit of half adder and give its truth tables.
8. (a) What is flip flop? Explain the function of RS-flip flop with its logic circuit and truth table.
(b) Describe a counter and its logic circuit. Name different types of counters used in digital circuits. Explain one of them.
9. Explain following details:
 - i. Computer software
 - ii. Language translators
 - iii. Graphical User Interface (GUI)
10. (a) What is an Operating System? What are the main functions of an Operating system?
(b) What do you mean by computer crimes? What is the software piracy problem? What types of remedy are available or useful to protect a computer from the computer piracy?



BCA Part-1 Examination, 2007
FUNDAMENTALS OF C PROGRAMMING

Time allowed: Three Hours
Maximum Marks: 50

Attempt any five questions. All questions carry equal marks.

1. (a) What are the different types of Operators available in C?
(b) What is an Escape sequence? Explain.
2. (a) Write a C program to a date dd/mm/yy and check for the validity of the date.
(b) Explain the following with examples:
 - i. Iterative statement
 - ii. Consol I/O Statement
 - iii. Unconditional branching
3. (a) What are the four primitive type in C?
(b) Use the typedef statement to create a double precision variable called big_float?
(c) Create variables capable of the storing the following:
15
15.899
'a'
100 car prices
19.98899882
4. What are the different storage classes available in C? Explain them using appropriate example. Write an application of static variable.
5. Show how you will use for statement as a 'fixed iterative loop' while loop 'and' infinite loop. Give example of each.
6. (a) How does & differ from &&?
(b) What is a construct? List the construct employed by C.
(c) Modify the expression
If(age<25)
To text the following:
 - i. And has an income greater than 15000
 - ii. And whose sex is male
 - iii. Or whose age is greater than 50
7. (a) What do you mean by zero based addressing?
(b) What are arrays? Show the storage of a two-dimensional array in memory with help of a diagram. Write a C-program to multiply two matrices.
8. (a) What is pointer? How are pointers used to access element of an array? Write a program in 'C' which accepts 10 elements of an array (type integer) and display them using pointers.
(b) Write the difference between Structure and Union.
9. What are different file types available in 'C'? Write a program to store name and telephone number of few relatives in a file. Mention which type of file is used in your program.
10. (a) Give a text file, create another text file deleting all the vowels(a, e, i, o, u)
(b) What is a tag?
(c) Explain switch statement



BCA Part-1 Examination, 2007
PC SOFTWARE

Time allowed: Three Hours
Maximum Marks: 50

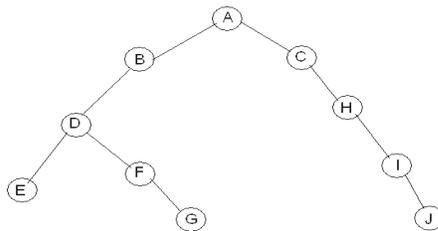
Attempt any five questions in all, selecting **one** question from each Unit. All questions carry equal marks.

1. Explain trade off between time and space complexity of algorithm using suitable examples.
2. Explain algorithm for transpose of a 2D matrix.
3. Apply DFS and BFS to visit all vertices in the following graphs:



Show each step clearly.

4. Explain Krushkal algorithm.
5. Search the number 14 using linear and binary search show all steps.
25 8 15 20 32 14 07 1
6. Differentiate between:
 - a. External and sorting
 - b. Inverted and multilists
7. Give the preorder and post-order traversal of the following tree:



8. Explain sequential file organization and ISAM with an example.
9. Explain (any two)
 - i. Primitive and composite data typer
 - ii. Quick sort algorithm
 - iii. Single and double link list
 - iv. Records and files



BCA Part-1 Examination, 2007
MULTIMEDIA BASIC

Time allowed: Three Hours
Maximum Marks: 50

Attempt any five questions. All questions carry equal marks.

1. (a) Discuss various stages of multimedia design.
(b) How is multimedia beneficial in communication?
2. (a) Discuss compression of images and various image file formats.
(b) Write short notes:
 - i. MIDI sounds
 - ii. MP3 files
 - iii. 3D sound
3. (a) Explain the process of capturing audio, with the help of a suitable example.
(b) Write short notes:
 - i. Intelligent MM System
 - ii. Intelligent VR System
4. (a) Explain the terms MPEG and DVI.
(b) Explain Real Time Video Communication.
5. Explain Application environment of multimedia in education and office.
6. (a) What is vectorisation? How is it useful for image?
(b) Explain sound card and explain the attributes of sound.
7. (a) What do you understand by the term by element as applicable to HTML? How does it differ from tag? What is the relationship between attribute and HTML elements? Give example of an attribute.
(b) Write HTML tags for the following with example
 - i. Making Text italic
 - ii. Underlining the text.
8. (a) What are the different kinds of images file that HTML documents accepts?
(b) Write short notes on:
 - i. Block-oriented elements in HTML
 - ii. List in HTML documents



BCA Part-1 Examination, 2007
PC SOFTWARE

Time allowed: Three Hours
Maximum Marks: 50

Attempt any five questions in all, selecting **one** question from each Unit. All questions carry equal marks.

Unit 1

- (a) Describe the process of Modem installation in MS-Windows?
(b) What is taskbar? Describe how to use and configure the taskbar and its toolbars.
- (a) What is a user interface? Differentiate between CUI and GUI.
(b) Explain OLE.
(c) What is screen saver? Explain its utility.

Unit II

- (a) What are templates and wizards? How are they helpful in MS-Word?
(b) What do you understand by footer? How do you create footer for a document?
How do you define the position of the footer on a page?
- (a) How do you define the page size and margins for a document? Briefly describe Left, Right and Gutter Margin.
(b) Briefly describe the various options available in the print dialog box.

Unit III

- (a) Explain the various addressing modes supported in MS-Excel that can be used in the formula.
(b) Explain the various formats which can be applied on the data entered in a cell.
- Explain the following functions in brief by giving an example:
 - SUM()
 - PMT()
 - NPV()
 - MAX()
 - RATE()

Unit IV

- (a) Explain the following :
 - Slide sorter
 - Preformatted auto layouts
(b) What is PowerPoint? How can it be used effectively?
- What are different ways in which

Unit V

- What are different ways to create report in MS-Access? Explain.
- (a) Describe the process of adding drop down list with a field.
(b) What do you mean by Input Mask? Describe the process of creating input mask in MS-Access.
(c) Explain the process of defining relationship between tables in MS-Access.