

BCIS-N-119 A-21  
B.C.A. I Semester (CBCS) Degree Examination  
COMPUTER SCIENCE  
Computer Fundamentals  
Paper : DSC - 1A  
(New)

Time : 3 Hours

Maximum Marks : 80

SECTION -A

Answer **All** of the questions. Each question carries 2 marks.

(10×2=20)

1. a) Write any two uses of computer
- b) What is the expansion of EBCDIC and BCD?
- c) What is OCR & OMR?
- d) Define Operating system.
- e) Define Primary memory.
- f) Define Cache memory
- g) Expand BIOS and USB.
- h) What is Bluetooth?
- i) List the advantages of E-Library
- j) What is Google Scholar?

SECTION -B

Answer any **Four** questions. Each question carries 5 marks.

(4×5=20)

2. What are the characteristics of Computer?
3. Explain the various types of Printers.
4. Explain Processors.
5. Write note on SMPS and ports.
6. Explain briefly about Big Data.
7. Explain E-Library in detail.-

### SECTION - C

Answer any **Four** questions. Each question carries **10** marks.

(4×10=40)

8. Explain in detail the history and generation of Computer.
9. Explain briefly ASCII code.
10. What is Monitor? Explain different types of Monitors.
11. Define Memory? Briefly explain the different types of Memory?
12. Write note on Software and Hardware.
13. What is Data Mining? Explain the Application of Data Mining.

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**BCIS-N-123 A-21**  
**B.C.A. I Semester Degree Examination**  
**COMPUTER SCIENCE**  
**Problem Solving Using C**  
**Paper : DSC - 2A**  
**(New)**

**Time : 3 Hours**

**Maximum Marks : 80**

**SECTION - A**

(10×2=20)

Answer **ALL** questions.

1. a) Define Constant.
- b) Write short-hand assignment operator available in C.
- c) Mention different input-output functions available in C.
- d) What is an array?
- e) What is pointer?
- f) Define recursion
- g) Write general syntax of Goto Statement.
- h) How to declare structure variables?
- i) Define Binary file.
- j) Write the general form of do-while statement.

**SECTION -B**

(4×5=20)

- Answer any **Four** questions. Each question carries 5 marks.
2. Define identifiers. What are the rules to follow to declare identifiers?
  3. Explain Switch statement with syntax and example.
  4. Write a C program to find sum of natural numbers using functions.
  5. Write a note on Dynamic Memory Allocations.
  6. Explain the difference between Structures and Unions.
  7. Explain file input-output functions.

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SECTION - C

(4×10=40)

Answer any **Four**

8. Write a note on Basic structure of C program. Give an example.
9. Explain different types of operators available in C.
10. Define looping. Explain while and for loop with general syntax and example.
11. Write a C program to find addition of two matrices.
12. Explain following with example.
  - a) Inline function.
  - b) Arrays of pointers.
13. Write a note on:
  - a) Arrays of Structures.
  - b) Working with Binary files.

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**BCIS-N-124 A-21**  
**B.C.A. I Semester (CBCS) Degree Examination**  
**COMPUTER SCIENCE**  
**Digital Electronics**  
**Paper : DSC - 3A**  
**(New)**

**Time : 3 Hours**

**Maximum Marks : 80**

**SECTION - A**

Answer **ALL** of the questions. Each Carries 2 Marks.

(10×2=20)

1. a) Define Boolean Algebra
- b) Define SOP and POS forms
- c) Define Half adder.
- d) What is K-map. List its types
- e) Draw logic symbol, truth table for XOR gate.
- f) Define Asynchronous Counters
- g) What is RAM? Give two examples of RAM
- h) What is register transfer
- i) What is PLA.
- j) Write the types of Micro operations.

**SECTION - B**

Answer any **Four** questions. Each question carries 5 marks.

(4×5=20)

2. State and prove Demorgan's laws/theorems.
3. What is an Adder? Explain half adder with Logic circuit diagram.
4. Explain R-S flip-flop. Using proper logic Diagram and truth table.
5. Briefly explain 4 to 1 Multiplexer.
6. Discuss 4 - bit Binary counter.
7. Differentiate between Static RAM and Dynamic RAM



**SECTION - C**

Answer any **Four** Questions. Each Carries **10** Marks.

**(4×10=40)**

8. Convert the following:
- i) Binary to Decimal  $(11001.011)_2 = ( ? )_{10}$
  - ii) Decimal to Octal  $(12345)_{10} = ( ? )_8$
  - iii) Octal to Binary  $(567)_8 = ( ? )_2$
  - iv) Hexadecimal to Decimal  $(F3)_{16} = ( ? )_{10}$
9. Explain the working of NAND and NOR gates as universal gates.
10. Explain D-flip flop and T-flip flop
11. Explain the working of Master-slave JK flip-flop
12. What is K-map? Explain two, three and four variables map?
13. Explain with logic diagram of 4-bit serial in, serial out, shift register.