

# NATIONAL BUSINESS COLLEGE

## ASSIGNMENT

BCA 1<sup>st</sup> YEAR

### INFORMATION TECHNOLOGY

**F.M- 100**

**Last Date to Submit: - 28<sup>th</sup> AUG 2021**

**Answer all the questions: -**

- (1) Draw block diagram to illustrate the basic organization of a computer system and explain the function of the various units.
- (2) (a) Explain the working of DOT matrix printer.  
(b) What is system software? Give five examples.
- (3) Define the term Web page and World Wide Web. How is external linking being different from internal linking?
- (4) Explain the following term:  
(a) WWW (b) Protocol (c) Topology (d) TCP/IP
- (5) What is Multimedia. Discuss the role of multi-media in education, training and medical industry.

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BCA 1<sup>st</sup> YEAR

### OPERATING SYSTEM

**F.M- 100**

**Last Date to Submit: - 28<sup>th</sup> AUG 2021**

**Answer all the questions: -**

- (1) (a) What is Cache memory. Explain the cache read operations.  
(b) Explain DMA with neat clean diagram.
- (2) (a) What are the three main purpose of O/S.  
(b) What do you mean by short term scheduler?
- (3) When do page fault occurs? Describe the action taken by the operating system when a page fault occurs.
- (4) Explain the following term:
  - (a) Spooling
  - (b) Time sharing system
  - (c) Distributed System
  - (d) Real time system
- (5) State and explain the various characteristics criteria for CPU scheduling algorithm. Describe the priority scheduling algorithm.

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### FOUNDATION IN MATH

F.M- 100

Last Date to Submit: - 28<sup>th</sup> AUG 2021

Answer all the questions: -

(1) Represent the following by Venn-diagram

(a)  $A-(B-C)$       (b)  $A-(B \cup C)$       (c)  $A \cup B \cup C$

(2) Solve the following system of linear equation by matrix inversion method:

$$X+Y+2Z=4$$

$$2X-Y+3Z=9$$

$$3X-Y-Z=2$$

(3) If

$$A = \begin{bmatrix} 3 & 7 & -2 & 2 & 3 & 1 & 4 & 5 & 9 \end{bmatrix}$$

Find: (a) Transpose of A (b) Adjoint of A (c) Inverse of A

(4) Explain the following term with suitable examples:

(a) Konigsberg bridge problem    (b) Regular graph    (c) Orthogonal matrix    (d) Cartesian product of sets

(5) In a group of 40 students, 22 can speak Hindi only, 12 can speak English only. How many can speak both the languages.

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## **ASSIGNMENT**

BCA 1<sup>st</sup> YEAR

### **COMMUNICATION SKILLS**

**F.M- 100**

**Last Date to Submit: - 28<sup>th</sup> AUG 2021**

**Answer all the questions: -**

- (1) What is punctuation. Explain eight categories with example.
- (2) What is a group discussion? Write characteristics of group discussion.
- (3) What is business letter? Explain all standard parts of business letter.
- (4) Describe the following in details:
  - (a) Social networking
  - (b) Power-point presentation
  - (c) Phonetic Transcription
- (5) Discuss the use of computer and supporting electronic devices in an effective presentation.

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## ASSIGNMENT

BCA 1<sup>st</sup> YEAR

### COMPUTER ARCHITECTURE

F.M- 100

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Answer all the questions: -

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(1) What is binary counter? Why T and J-K flip flop are employed in counter circuit. Give the circuit diagram of 4-bit synchronous binary counter.

(2) What is Multiplexer? What is the function of multiplexer inputs?

Draw logic diagram of 4 to 1 line multiplexer giving function table also.

(3) Explain the various registers and their functions used in basic computers.

(4) Describe the following in details:

(b)DMA

(b) K-MAP

(c) INTERRUPT

(5) (a) What is I/O module? Define its types and functions.

(b) What is synchronous and Asynchronous counter? What is virtual memory.

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## ASSIGNMENT

BCA 1<sup>st</sup> YEAR

### 'C' PROGRAMMING

F.M- 100

Last Date to Submit: - 28<sup>th</sup> AUG 2021

Answer all the questions: -

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(1) Write a c program to print the following pattern:

```
1
2  1  2
3  2  1  2  3
```

(2) Which technique of searching an element in the array do you prefer to use and in which situation?

(3) Write a program to read and display the information about an employee using Nesting structures.

(4) What is the difference between “call by value” and “call by reference” using a suitable example.

(5) Write an algorithm and then write a ‘c’ program to enter the roll number and marks of any three courses of few students from the keyboard and write to a “student.txt” file.