

(Following paper code and roll no. to be filled by student in the answer books )

PAPER CODE:(BMC-101)	ROLL NO.	[10 boxes]
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**BBS COLLEGE OF ENGINEERING & TECHNOLOGY  
PRAYAGRAJ**

**FIRST SESSIONAL EXAM (2025-2026)**

**COURSE: MCA**

**SEM: 1st**

**SUBJECT: Fundamental of Computers and Emerging Technologies**

**MAX TIME: 1:30 HR**

**NOTE: 1. QUESTION PAPER CONTAINS THREE PARTS.**

**2. ALL SECTIONS ARE COMPULSORY.**

**(SECTION A)**

**[5 X 1 = 5]**

**Q1. ATTEMPT ALL FROM THE FOLLOWING:**

- Define the term Operating System.
- Compare computer hardware and software with example.
- Write an algorithm to check whether a given number is even or odd.
- What is non-volatile memory?
- What is the difference between algorithm and pseudo code?

**(SECTION C)**

**[2X3.5= 7]**

**Q3. ATTEMPT ANY TWO OF THE FOLLOWING:**

- Define the term algorithm. Discuss its characteristics. Write an algorithm to find maximum of three numbers.
- What is topology? Describe four basic topologies with their respective advantages and limitations.
- Build a flow chart to check whether given year is a leap year or not. Give any two inputs to show the working.

**(SECTION B)**

**[4 X 2 = 08]**

**Q2. ATTEMPT ANY FOUR OF THE FOLLOWING:**

- Discuss multiprogramming, multitasking and multiprocessing operating system.
- How command based is different from GUI based operating system?
- Discuss some differences between LANs and WANs.
- Write the difference between application software and system software.
- Write the pseudo code to calculate the factorial of a number.
- Differentiate among assembler, compiler and interpreter.