

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI**  
**(END SEMESTER EXAMINATION)**

**CLASS: BBA/IMBA**  
**BRANCH: MANAGEMENT**

**SEMESTER: I**  
**SESSION: MO/2024**

**SUBJECT: MN101 FUNDAMENTALS OF COMPUTING**

**TIME: 3 Hours**

**FULL MARKS: 50**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data handbook/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	What is CPU? Explain its various components.	[5]	1 1
Q.1(b)	Discuss the need for programming languages for problem-solving using computers.	[5]	1 2
Q.2(a)	Convert the following decimal numbers to binary, octal, and hexadecimal numbers. i. 174    ii. 128    iii. 324	[5]	2 3
Q.2(b)	Perform the following conversions: i. $(100011)_2 = (\dots)_{10} = (\dots)_8 = (\dots)_{16}$ ii. $(AD3)_{16} = (\dots)_2 = (\dots)_{10}$	[5]	2 3
Q.3(a)	Find 1's and 2's complement of the following binary numbers. i. 101101    ii. 101001    iii. 111000    iv. 110011    v. 10101010	[5]	3 3
Q.3(b)	Evaluate: i. $1001001 + 1101$ ii. $11001 + 10101$ iii. $10101 - 1011$ iv. $11001 - 1101$ v. $1011 \times 101$	[5]	3 3
Q.4(a)	What is memory hierarchy?	[5]	1 2
Q.4(b)	Describe a magnetic disk as a storage device.	[5]	1 2
Q.5(a)	What are computer networks? Explain their key components and various types.	[5]	4 2
Q.5(b)	What is an operating system? Discuss various types of operating systems.	[5]	5 2

**.....09/12/2024.....M**