

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/SP2023)

CLASS: IMSc.
BRANCH: QEDS

SEMESTER: I
SESSION: MO/2022

SUBJECT: ED109 INTRODUCTION TO PROGRAMING & DATA STRUCTURE

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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Q.1(a)	Enumerate the advantages and disadvantages of third generation computers.	[2]	CO	BL
Q.1(b)	Describe IAS Memory Format? Outline the significance of Left instruction and Right Instruction in Memory Format?	[3]	CO1	
Q.2(a)	Describe the stored program computer?	[2]	CO1	
Q.2(b)	Write a short note on System Management Programs?	[3]	CO2	
Q.3(a)	Differentiate between the data models to design Database Management System.	[2]	CO2	
Q.3(b)	Describe the organization of an Embedded Systems.	[3]	CO1	
Q.4(a)	Develop a flowchart for finding the greatest among the given three numbers.	[2]	CO1	
Q.4(b)	Describe an algorithm for calculating the average of n numbers.	[3]	CO1	
Q.5(a)	Write a psuedocode for solving the quadratic equation for x where $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	[2]	CO1	
Q.5(b)	If $(b^2 - 4ac)$ is negative, do not calculate the roots but instead print 'NEGATIVE'. Convert the hexadecimal number AB21.34 into its equivalent in the decimal system.	[3]	CO1	

:::::: 20/01/2023 :::::M