Seat No.						

Institute: (0701) SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE

Programme: (070122, 070124) BACHELOR OF TECHNOLOGY (CS, IT)
Batch: 2017-21, 2018-22, 2019-23
Semester: III
Course: Computer Organization
Course Code: 0701220304 CS; 0701240304 IT

Date: 10/06/2021   **Maximum Marks: 45**

Day: Thursday   **Time: 3:00 pm – 4:30 pm**

Instructions:
1. **All questions are compulsory.**
2. **Make suitable assumptions wherever required.**
3. **Neat diagram must be drawn whenever necessary.**

Q.1	**a)**	Draw a flowchart of restoring binary division. Perform 17 / 3.	**6**	**CO1**
	b)	Explain different interconnection structures with neat diagram.	**6**	**CO1**
Q.2	**a)**	Explain block diagram of 8086 microprocessor.	**6**	**CO2**
	b)	Classify different addressing modes.	**5**	**CO2**
Q.3		Explain with example and neat diagram microinstruction format.	**5**	**CO3**
Q.4	**a)**	Main memory has 3 page frames and processor requires pages from virtual memory in following order: **5, 7, 6, 0, 7, 1, 7, 2, 0, 1, 7, 1, 0** Show implementation of First-In First-Out, Least Recently Used and Optimal Algorithm. Compare page faults.	**6**	**CO4**
	b)	Explain how mapping is performed in direct mapping cache organization with suitable diagram.	**6**	**CO4**
Q.5		Demonstrate working mechanism of computer's input device: Scanner.	**5**	**CO5**

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