KLS Gogte Institute of Technology, Belagavi

Department of Computer Science and Engineering **Academic Year: 2019-20(ODD SEM)**

Program: B.E (Computer Science and Engineering) **Semester:** III

IA Test – I

Course Title: Computer Organization **Code: 18CS35**

Max. Marks: 30 (**Part A: 5 marks and Part B: 25 marks)** **Duration:** 1 Hr. 15 Mins. **Date: 17/09/2019**

Instructions:	1.	Part A is compulsory
	2.	Part B: Answer any Five Questions.

Q.No.	**PART A**	[L]	[CO]	[P]	[M]
1	If k bits are used to represent address, then the address space of that computer system is_____ a. k bits b. 2^k bits c. 2k bits d. None	1	1	1	5
2	_____ register points to the address of the next instruction to be fetched for execution a. IR b. PC c. MAR d. MDR				
3	Overflow can occur only when adding two numbers that have the same sign. (True/false)				
4	When I/O devices and the memory share the same address space, the arrangement is called _____ a. Memory mapped I/O b. Program Controlled I/O c. Shared Memory d. None				
5	Lower byte addresses are used for the more significant bytes is called as _____				

Q. No.	**PART B**	[L]	[CO]	[PO]	[M]
1.	With diagram, discuss in brief the communication between memory and processor.	2	1	2	5
2.	Explain the basic performance equation and SPEC rating. Discuss the ways to reduce T value.	2	1	1	5
3.	What is byte addressability? Explain Little endian and Big endian address assignments.	2	1	2	5
4.	Assume that 6 bits are used for representing the numbers. Perform the following operations and comment on whether arithmetic overflow occurs or not? i. 28+9 ii. 30-16	3	3	1	5
5.	Explain any five addressing modes with syntax and an example.	2	2	1	5
6.	What is an interrupt? Discuss different ways to enable and disable interrupts.	2	2	2	5
7.	Explain how synchronization is provided between COMPUTE and PRINT routines using interrupts.	2	2	2	5

Staff Incharge **Module Coordinator** **IQAC members**