DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Winter Examination – 2022

Course: B. Tech.   **Branch : AI&DS**   **Semester : III**

Subject Code & Name: BTESC304 **&** Computer Architecture & Operating Systems

Max Marks: 60   **Date:**   **Duration: 3 Hr.**

Instructions to the Students:
1. *All the questions are compulsory.*
2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.*
3. *Use of non-programmable scientific calculators is allowed.*
4. *Assume suitable data wherever necessary and mention it clearly.*

		(Level/CO)	Marks
Q. 1	**Solve Any Two of the following.**		**12**
A)	Explain instruction set Architecture? Give examples.	L1/CO1	6
B)	Describe about different types of addressing modes.	L1/CO1	6
C)	Explain Functional blocks of computer Architecture.	L1/CO1	6
Q.2	**Solve Any Two of the following.**		**12**
A)	Compare between Internal Fragmentation and External Fragmentation.	L2/CO2	6
B)	Explain Logical Address and Physical Address in detail.	L2/CO2	6
C)	Explain Segmentation Architecture.	L2/CO2	6
Q. 3	**Solve Any Two of the following.**		**12**
A)	Explain I/O Device Interfaces in detail.	L3/CO3	6
B)	Describe Basic Concept of pipelining.	L3/CO3	6
C)	Explain conditions for Incoherence.	L3/CO3	6
Q.4	**Solve Any Two of the following.**		**12**
A)	Explain computer system Architecture.	L4/CO4	6
B)	Describe Operating System Operations.	L4/CO4	6
C)	Write a note on Parallel Systems.	L4/CO4	6
Q. 5	**Solve Any Two of the following.**		**12**
A)	Describe solution to Critical Section Problem.	L5/CO5	6
B)	Explain Semaphore Implementation.	L5/CO5	6
C)	Write a note on Bounded-Buffer Problem.	L5/CO5	6

*** End ***