

**Paper Code : 21325**  
**F-425**

**B.C.A. (Fifth Sem.) Examination, 2022-23**

**(New Course)**

**Paper-BCA-505-N**

**ADVANCED COMPUTER ARCHITECTURE**

**Time : Three Hours / [ Maximum Marks : 70**

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**Note :** Attempt any **five** questions. **All** questions carry equal marks. Symbols used have their usual meanings.

1. (a) Explain parallelism in Uniprocessor systems.
- (b) Describe data driven computing with example.

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2. (a) What are various addressing schemes? Explain with example.
- (b) Explain reservation Table Design for Instruction pipelined units.
3. (a) What is SIMD? Describe suffice exchange interconnection network.
- (b) What is job sequencing? Explain.
4. (a) What is multiprocessing? Differentiate loosely coupled multiprocessors with Tightly coupled multiprocessors.
- (b) What is Input-output subsystem? Describe with proper example?
5. (a) What is difference between MUMA and Time shared Interconnection Network.
- (b) State and explain parallel sorting algorithm for array processor.

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(2)

6. (a) What are multiprocessor scheduling strategies? Explain.
- (b) What do you understand SPARC architecture beneficial for parallelism.
7. (a) What is Window register concept? State your comments.
- (b) Describe Architecture of TI-ASC system.
8. Explain any **two** of the following :
- (a) Multiport Memories.
- (b) Addressing schemes for main memory.
- (c) RISC Scalar Processors
- (d) Matrix Multiplication on Concurrent Processor