

**Course Outcomes & CO-PO-PSO Mapping and Justification**

Subject	Advanced Computer Architecture	17CS72
COURSE OUTCOMES:		
CO No.	On completion of this course, students will be able to:	Cognitive Level
17CS72.1	Evaluate the performance of parallel computing architectures	L5
17CS72.2	Understand the hardware and Memory Hierarchy technologies.	L2
17CS72.3	Analyze various bus and memory system, Models of Pipelining and Superscalar Techniques	L4
17CS72.4	Analyze Parallel and Scalable architectures.	L4
17CS72.5	Apply parallel programming concepts.	L3

CO-PO-PSO MAPPING

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
17CS72.1	2	1	1	-	-	-	-	-	-	-	-	1	-	-	2
17CS72.2	2	-	1	-	-	-	-	-	-	-	-	1	-	-	2
17CS72.3	2	1	1	-	-	-	-	-	-	-	-	1	-	-	2
17CS72.4	2	1	1	-	-	-	-	-	-	-	-	1	-	-	2
17CS72.5	2	1	1	-	-	-	-	-	-	-	-	1	-	-	2
Avg. Mapping	2.0	1.0	1.0	-	-	-	-	-	-	-	-	1.0	-	-	2.0

CO-PO-PSO JUSTIFICATION

CO No.	PO/PSO	CL	Justification
17CS72.1	PO1	2	Apply the knowledge of fundamentals of computer science & engineering in designing processor and evaluating the performance
	PO2	1	Apply knowledge to analyze the problem and design the system.
	PO3	1	Apply and implement algorithm for dynamic instruction scheduling to enhance the performance of processor.
	PO12	1	Identify the deficiencies and demonstrate the need of updating for the current architecture to overcome the deficiency.
	PSO3	2	Apply the knowledge of different processors to analyze the performance tradeoffs
17CS72.2	PO1	2	Apply the knowledge of fundamentals of computer science & engineering in designing cache and memory
	PO3	1	Ability to perform systematic evaluation of the degree to which several design concepts meet the criteria in designing processor and memory.
	PO12	1	Apply the knowledge of parallel computing to design a better memory
	PSO3	2	Understand the various hardware and memory technologies.
17CS72.3	PO1	2	Apply knowledge on the design of pipelined processor and analyze their performance. Apply the knowledge of execution of an instruction with in memory using different pipelining techniques.
	PO2	1	Analyze the hurdles in the pipeline. Analyze the performance of a system using linear and non-linear pipeline processors
	PO3	1	Design the pipelined processor of various stages.
	PO12	1	Improve the performance of the pipelined processor with advanced techniques by doing higher studies.
	PSO3	2	Analyze the numerous hurdles in pipeline design.
17CS72.4	PO1	2	Apply the knowledge of fundamentals of computer science & engineering in designing multiprocessor and multicomputer.
	PO2	1	Analyze the super scalar techniques and implement the system architecture design.
	PO3	1	Design a system using multi vector multiprocessor.
	PO12	1	Apply latency hiding techniques to design a scalable, multithreaded and dataflow architectures.
	PSO3	2	Analyze various design issues of different types of processors.
17CS72.5	PO1	2	Apply the knowledge of fundamentals of parallel programming in designing parallel algorithm.
	PO2	1	Analyze different Parallel Programming Models and able use in their algorithm.
	PO3	1	Design a solution using Parallel Programming concepts
	PO12	1	Identify the deficiencies and demonstrate the need of updating for the current programming model.
	PSO1	2	Design and develop software for parallel programming.

Prepared by:**HoD**