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| **newlogo.png** | **PES University,**  (Estd. Under Karnataka State Act 10 of 2013)  **100 ft Ring Road, Hosakerehalli, Bengaluru-560 085**  **Department of Computer Science & Engineering**  RR Campus and EC Campus |

**CIRCULAR**

Course Code and Course Title :**UE23CS251B - Microprocessor and Computer Architecture**.

Dear Students,

**Please note the following : ISA2 and Assignment-2**

**Syllabus: Common for both**(Assignment-2 and ISA2) **the parameters of evaluation.**

**Unit 3 : Basics of Cache and Cache Optimization:** Basics of Caches - Fully Associative, Direct Mapped and Set Associativity, Cache Performance, Basic Cache Optimization- Reduce in Miss Rate. Basic Cache Optimization- Reduce Miss Penalty, Reduce Hit Time.

**Unit 4 : Advances in Architecture:** Introduction to Parallel Computing, PC – Applications, Memory architecture, Flynn’s taxonomy, parallel programming models, Shared memory programming OpenMP-Introduction, loop-level parallelism, CUDA C, Program structure-vector kernel addition, device global memory and Data transfer, Hardware Multi threading, Parallel examples: matrix multiplication, PC-Design Issues, Amdahl’s Law, Gustafson Law, Multi-Core, Architecture, Introduction to GPU computing.

**Note:**

1. Please read/study the text book, Class notes, Programs, Problems, Lab programs, Lab assignments exercises shared on Google drive and refer to e- material available on PESU Academy portal.
2. Please map the topic mentioned in the course information document on the Google drive with the text book for more detailed description.

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| **Sl #** | **Evaluation Parameters** | **Details** | | | **Mode** | **Maximum**  **Marks :** |
| **1** | **Assignment -2** | Day: **Tuesday**  Date: **8th April 2025**  **( sections-CSE- A, F, G, H, I, K , L)** | Time: **3.45PM to 4.15PM** | | **Venue:**Given by PESU academy-Assessment Centre, GJB | **10 marks** |
| Day: **Friday**  Date: **10thApril 2025**  **(Sections-CSE-B, C ,D, E, J)** |
| 8th April2025  Coding Assignment  (problemstatement will be given) | Group activity (same team as Mini Project)– Coding assignment. The problem statements is assigned based on formula:  problem number=(TeamId mod 3) +1  Submission Mode: online . Submission link will be sent by respective subject teacher.  **Submission deadline:17th April 2025**  Max. Marks:10 marks | | | |
| **Question Paper Pattern(Split):** | | | | |
| Unit 3 Numericals:  3 questions | | **Paper and Pen**  **( Please bring the Blue Book yourself )** | | **10** |
| Coding assignment | | **Submission mode as per subject teacher** | | **10** |
|  | **Reduce 20 marks to 5 marks** | | | | | |
| 2 | **ISA -2** | **Question Paper Pattern per Unit:**  (Standard Pattern Defined by PES University).  Day, Date and Time as per announcement made by the office of Controller of Examinations. | | | | |
| **1 markers x 8 questions** | | | **CBT** | **8** |
| **2 markers x 2 questions** | | | **CBT** | **4** |
| **4 markers x 2 questions** | | | **Hybrid Mode** | **8** |

From: **V R Badri Prasad**, Course Anchor, PES University, Bangalore.

**Dr.Prajwala TR**, Anchor EC Campus PES University