

Total No. of Printed Pages:1

**SUBJECT CODE NO:- H-1829**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**M.E. (CSE/SE)**  
**El-1 Advanced Computer Architecture**  
**(REVISED)**

[Time: Three Hours]

[Max.Marks: 80]

Please check whether you have got the right question paper.

- N.B
1. Solve any 2 questions from each section.
  2. Assume suitable data if necessary.

**Section A**

- |     |   |    |
|-----|---|----|
| Q.1 | a) Explain buses and arbitration.<br>i) Backplane bus specification<br>ii) Addressing and timing protocols<br>iii) Arbitration , transaction and interrupts | 10 |
|     | b) Explain Flynn’s classification.  | 10 |
| Q.2 | a) Explain Instruction pipeline design in detail.   | 10 |
|     | b) Explain in detail non- linear pipeline processor.  | 10 |
| Q.3 | a) Explain super scalar and super – pipeline design.  | 10 |
|     | b) Explain the basic features of an array processor SIMD machine with neat diagram.   | 10 |

**Section B**

- |     |   |    |
|-----|---|----|
| Q.4 | a) How operation can be performed on vectors? Explain.                            | 10 |
|     | b) Explain the structure of Associative parallel processors.                      | 10 |
| Q.5 | a) Explain synchronization mechanism in multiprocessor and multicomputer systems. | 10 |
|     | b) Differentiate between static versus dynamic interconnectivity.                 | 10 |
| Q.6 | Write short notes on  |    |
|     | i) Tightly coupled and loosely coupled multiprocessor system.                     | 10 |
|     | ii) VLIW architecture   | 10 |