

**Syllabus Break up : Computer Architecture(5CS1)**  
**Class: V Sem.CSE**

**Faculty Name:-Gagandeep Kaur**

| <b>Lecture No.</b> | <b>Topic</b>   | <b>Month in which the topic will be covered</b> | <b>Actual date of covering</b> | <b>Reason for not covering the topic in due time</b> | <b>E contents provided</b> |
|--------------------|--|---|--------------------------------|--|----------------------------|
| <b>Unit 1</b>      |  |   |                                |  |                            |
| 1                  | Introduction to Computer Architecture and Organization.            | July-2015                                       | 23/07/2015                     | -  | QEEE Lectures              |
| 2                  | Von Neuman Architecture  | July-2015                                       | 24/07/2015                     | -  | QEEE Lectures              |
| 3                  | Flynn Classification   | July-2015                                       | 25/07/2015                     | -  | QEEE Lectures              |
| 4                  | Register Transfer and Micro operations: Register transfer language | July-2015                                       | 30/07/2015                     | -  | QEEE Lectures              |
| 5                  | Memory transfers.Arithmetic, Micro-operations                      | July-2015                                       | 31/07/2015                     | -  | QEEE Lectures              |
| 6                  | Logic Micro-operations,  | August-2015                                     | 01/08/2015                     | -  | QEEE Lectures              |
| 7                  | Shift Micro-operations   | August-2015                                     | 06/08/2015                     | -  | QEEE Lectures              |
| 8                  | Bus and memory transfers   | August-2015                                     | 07/08/2015                     | -  | QEEE Lectures              |
| 9                  | Computer Organization and Design: Instruction cycle                | August-2015                                     | 08/08/2015                     | -  | NPTEL.ac.in                |
| 10                 | Computer registers,common bus system                               | August-2015                                     | 13/08/2015                     | -  | NPTEL.ac.in                |
| 11                 | Computer instructions  | August-2015                                     | 14/08/2015                     | -  | QEEE Lectures              |
| 12                 | Addressing modes   | August-2015                                     | 20/08/2015                     | -  | QEEE Lectures              |

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|-----------------|--|----------------|------------|---|-----------------------|
| 13              | Design of a basic computer.                                    | August-2015    | 21/08/2015 | - | QEEE Lectures         |
| <b>Unit II</b>  |  |                |            |   |                       |
| 14              | Central Processing Unit: General register organization,        | August-2015    | 22/08/2015 | - | NPTEL.ac.in           |
| 15              | Stack organization   | August-2015    | 27/08/2015 | - | NPTEL.ac.in           |
| 16              | Instruction Pipeline and Vector processing: Pipeline structure | August-2015    | 28/08/2015 | - | QEEE Lectures         |
| 17              | Pipeline speedup, efficiency,formats                           | September-2015 | 03/09/2015 | - | QEEE Lectures         |
| 18              | Data transfer and manipulation                                 | September-2015 | 04/09/2015 | - | QEEE Lectures         |
| 19              | program control  | September-2015 | 10/09/2015 | - | QEEE Lectures         |
| 20              | RISC, CISC characteristics.throughput and bottlenecks          | September-2015 | 11/09/2015 | - | tutorialpoint.co<br>m |
| 21              | Arithmetic pipeline and Instruction pipeline.                  | September-2015 | 12/09/2015 | - | QEEE Lectures         |
| <b>Unit III</b> |  |                |            |   |                       |
| 22              | Computer Arithmetic: Adder                                     | September-2015 | 17/09/2015 | - | tutorialpoint.co<br>m |
| 23              | Ripple carry Adder   | September-2015 | 19/09/2015 | - | tutorialpoint.co<br>m |
| 24              | Carry look Ahead Adder   | September-2015 | 24/09/2015 | - | tutorialpoint.co<br>m |
| 25              | Multiplication: Add and Shift                                  | September-2015 | 26/09/2015 | - | QEEE Lectures         |
| 26              | Array multiplier and Booth Multiplier                          | October-2015   | 01/10/2015 | - | QEEE Lectures         |
| 27              | Division:restoring and Non-restoring Techniques                | October-2015   | 03/10/2015 | - | QEEE Lectures         |
| 28              | Floating Point Arithmetic: Floating point representation       | October-2015   | 08/10/2015 | - | QEEE Lectures         |
| 29              | Floating Point Arithmetic: Add, Subtract                       | October-2015   | 09/10/2015 | - | QEEE Lectures         |

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| 30 | Floating Point Arithmetic: Multiplication, Division. | October-2015  | 10/10/2015 | -                   | QEEE Lectures |
|    | <b>Unit IV</b>                                       |               |            | -                   |               |
| 31 | Memory Organization: RAM, ROM,                       | October-2015  | 15/10/2015 | -                   | QEEE Lectures |
| 32 | Memory Hierarchy, Organization                       | October-2015  | 16/10/2015 | -                   | QEEE Lectures |
| 33 | Associative memory                                   | October-2015  | 17/10/2015 | -                   | QEEE Lectures |
| 34 | Cache memory   | October-2015  | 23/10/2015 | Dussehra<br>Holiday | QEEE Lectures |
| 35 | Virtual memory: Paging and Segmentation.             | October-2015  | 29/10/2015 |                     | QEEE Lectures |
|    | <b>Unit V</b>  |               |            |                     |               |
| 36 | Input-Output Organization: Input-Output Interface.   | October-2015  | 30/10/2015 | -                   | QEEE Lectures |
| 37 | Modes of Transfer                                    | October-2015  | 31/10/2015 | -                   | QEEE Lectures |
| 38 | Priority Interrupt                                   | November-2015 | 05/11/2015 | -                   | QEEE Lectures |
| 39 | DMA  | November-2015 | 06/11/2015 | -                   | QEEE Lectures |
| 40 | IOP processor.                                       | November-2015 | 07/11/2015 | -                   | QEEE Lectures |
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