**Details of e-contents prepared for online classes**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of faculty** | **Name of subject** | **Topic name** | **Sub topic name** | **Types of e-content** | **Course name** | **Year of course** | **Link if uploaded anywhere** |
| **Deepti Pandey** | **Computer Organization**  **ECS-401** | Processor organization  **Remaining of unit 2** | General Register Organization, Stack Organization | Pdf | **B.tech 2nd yr**  **[CSE]** | **2019-20** | Shared via whatsapp group and Google Classroom |
| **Deepti Pandey** | **Computer Organization**  **ECS-401** | Control unit  **Unit 3** | Instruction types, formats, instruction cycles and subcycles (fetch and execute etc) | Pdf | **B.tech 2nd yr**  **[CSE]** | **2019-20** | Shared via whatsapp group and Google Classroom  <https://classroom.google.com/w/Njc0OTI1MjI4NTVa/t/all> |
| micro-operations, execution of a complete instruction. |
| addressing modes. |
| Microprogramme sequencing,  wide branch  addressing |
| microinstruction with next address field,  pre-fetching microinstructions |
| conceptof horizontal and vertical microprogramming. |
| Memory organization  **Unit 4** | Memory concept and hierarchy | Pdf | **B.tech 2nd yr**  **[CSE]** | **2019-20** | Shared via whatsapp group and Google Classroom |
| semiconductor RAM memories |
| 2D&2.5D memory  organization. ROM memories. |
| Cache memories concept and performance, address mapping |
| Auxiliary memories: magnetic disk, magnetic tape and optical disks |
| Virtual memory: concept implementation and replacement algorithm. |
| **Deepti Pandey** | **Computer Organization**  **ECS-401** | Input/output  **Unit 5** | I/O interface, I/O ports,  Interrupts: interrupt hardware, types of interrupts and exceptions | doc | **B.tech 2nd yr**  **[CSE]** | **2019-20** | Shared via whatsapp group and Google Classroom |
| Modes of Data Transfer: Programmed I/O, interrupt initiated I/O and Direct memory access |
| Serial Communication: Synchronous & asynchronous communication, standard  communication interfaces. |
| **Deepti Pandey** | **Graph theory**  **ECS-505** | **CUT SET AND PLANAR GRAPH**  **Unit 3** | Cuts sets and cut vertices and properties, all cut sets in a graph | Hand written notes [PDF] | **B.tech 3rd yr**  **[IT]** | **2019-20** | Shared via whatsapp group and Google Classroom |
| fundamental circuits and cut sets,connectivity and separability |
| network flows and related numerical problems |
| Planer graphs and Discussion on criterion of planarity |
| Kuratowski graphs, detection of planarity, |
| combinatorial and geometric dual:geometric dual, thickness and crossings. |
| **Deepti Pandey** | **Graph theory**  **ECS-505** | **VECTOR SPACE AND COLORING**  **Unit 4** | Basis vector, cut set vector, circuit vector, circuit and cut set subspaces, | Hand written notes  [PDF] | **B.tech 3rd yr**  **[IT]** | **2019-20** | Shared via whatsapp group and Google Classroom |
| Incidence matrix, Circuit matrix, Path matrix, Cut-set matrix,Adjacency matrix. |
| Define Coloring, chromatic number, of a graph, |
| Chromatic partitioning, chromatic polynomials, |
| Matching, covering concept of a graph and four color problem |

**REFERENCE BOOKS:**

1. COMPUTER SYSTEM ARCHITECTURE, MORRIS M. MANO, 3RD EDITION, PRENTICE HALL INDIA.
2. DEO, N, GRAPH THEORY WITH APPLICATIONS TO ENGINEERING AND COMPUTER SCIENCE, PHI