**JECRC, JAIPUR**

LECTURE PLAN EDTC (B.Tech. IV Sem.) session 2017-18

FACULTY NAME:  **Sunil kr sharma**  TOTAL LECTURE: 38

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| **I** |  | **Unit** -**1**  Dynamics of Electric Drives |
| 1 | Introduction |
| 2 | Fundamental torque equations |
| 3 | speed-torque conventions |
| 4 | multi -quadrant operation, |
| 5 | Nature and classification of load torques |
| 6 | steady state stability |
| 7 | load equalization, |
| 8 | close loop configurations of drives. |
| **II** |  | **Unit-2**  DC Drives: |
| 9 | Introduction |
| 10 | Speed torque curves |
| 11 | torquelimitation in armature voltage and field control |
| 12 | and power limitation in armature voltage and field control |
| 13 | Starting, |
| 14 | Braking:  Regenerative Braking, dynamic braking and plugging |
| 15 | Speed Control-Controlled Rectifier fed DC drives. |
| 16 | Chopper Controlled DC drives. |
| **III** |  | **Unit -3**  Induction Motor Drives I |
| 17 | Introduction |
| 18 | Starting |
| 19 | Braking-Regenerative braking, plugging and dynamic braking. |
| 20 | Speed Control |
| 21 | Stator voltage control, |
| 22 | variable frequency control from voltage source, |
| 23 | Voltage Source Inverter (VSI) Control. |
| **IV** |  | **Unit-4**  Induction Motor Drives II |
| 24 | Introduction |
| 25 | Variable frequency control from current source, |
| 26 | Current Source Inverter (CSI) Control, |
| 27 | Cycloconverter Control |
| 28 | Static rotor resistance control, |
| 29 | Slip Power Recovery |
| 30 | Stator Scherbius drive, |
| 31 | Static Kramer drive. |
| 32 | Static Kramer drive. |
| **V** |  | **Uni**t**-5** Synchronous Motor Drive: |
| 33 | Introduction |
| 34 | Synchronous Motor Drive:Control of Synchronous |
| 35 | Motor-Separately Controlled and VSI fed Self-Controlled Synchronous Motor Drives. |
| 36 | Dynamic Braking of Synchronous Motor with VSI. |
| 37 | Regenerative Braking of Synchronous Motor with VSI. |
| 38 | Control of Synchronous Motor Using Current Source Inverter (CSI). |

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