Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov / Dec – 2016**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14EE2012** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ELECTRIC DRIVES AND CONTROL** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | State essential parts of electrical drives | CO2 | 7 |
| b. | What are the functions of a power modulator? | CO1 | 6 |
| c. | Mention the components of load torques. | CO2 | 7 |
| (OR) | | | | |
| 2. | a. | What are the reasons for using load equalisation in an electric drive? | CO3 | 8 |
| b. | Explain the multiquadrant operation of an electric drive with an example. | CO1 | 12 |
| 3. |  | How do you select the motor rating while that motor is operated for short time duty and intermittent duty cycle. | CO3 | 20 |
| (OR) | | | | |
| 4. | a. | Discuss the following closed-loop control of drives:  Current Limit Control. | CO1 | 7 |
| b. | Closed Loop Torque Control. | CO1 | 6 |
| c. | Closed Loop Speed Control of Multi-motor Drives. | CO2 | 7 |
| 5. |  | Elucidate single phase half controlled rectifier control of dc separately excited motor in continuous conduction and discontinuous conduction mode. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | How is the chopper used to operate the DC separately excited motor in motoring and regenerative braking operation? | CO1 | 20 |
| 7. |  | Describe the operation of voltage source inverter fed induction motor drive with neat sketch. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Discuss about the speed control of three phase Induction motor using static Kramer Drive slip power recovery schemes. | CO2 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Explain in detail about the solar powered pump drives. | CO3 | 20 |

ALL THE BEST