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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**Supplementary Examination – June – 2017**

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| **Code :** | **14EE2016** | **Duration :** | **3hrs** |
| **Sub. Name :** | **POWER SYSTEM PROTECTION AND SWITCH GEARS** | **Max. marks :** | **100** |

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

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Compare Dry type air core reactor and Oil immersed air core reactor. | CO1 | 10 |
| b. | Discuss the need of Potential transformers. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Describe the characteristics of current transformers. | CO1 | 15 |
| b. | Categorize the protective relay based on the technology. | CO1 | 5 |
| 3. | a. | Write the function of directional overcurrent relay. | CO1 | 10 |
|  | b. | List the classification of distance relays and explain them briefly. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Discuss the importance of negative sequence relay. | CO1 | 10 |
|  | b. | Explain the balanced voltage principle used in wire pilot protection. | CO2 | 10 |
| 5. | a. | With the help of a neat diagram, explain the differential protection of transformers. | CO2 | 10 |
|  | b. | Explain the need of busbar protection. | CO2 | 10 |
| (OR) | | | | |
| 6. | a. | List the different faults happening in the motor and explain them in detail. | CO2 | 15 |
|  | b. | Write short notes on feeder protection. | CO2 | 5 |
| 7. | a. | Compare and Contrast Bulk oil and Minimum oil circuit breaker.Discuss its constructional features. | CO3 | 15 |
|  | b. | Distinguish between circuit breakers and relay. | CO3 | 5 |
| (OR) | | | | |
| 8. |  | Describe in detail the construction,working principle and advantages of SF**6** circuit breaker. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss briefly about the lightning phenomenon and the lightning strokes. | CO3 | 15 |
|  | b. | Write short notes on earthing of appliances. | CO3 | 5 |

ALL THE BEST