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



**End Semester Examination – Nov/Dec – 2017**

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

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | | **Marks** | |
| 1. | a. | Explain the features of Potential transformers. | | CO2 | | 10 |
| b. | Briefly describe the need for protection schemes and explain the causes of faults. | | CO2 | | 10 |
| (OR) | | | | | | |
| 2. | a. | Differentiate Dry type air core reactor and Oil immersed air core reactor. | | CO2 | | 10 |
| b. | Discuss the features of Current transformers. | | CO2 | | 10 |
|  |  |  | |  | |  |
| 3. | a. | List the classification of distance relays and explain them briefly. | | CO1 | | 10 |
|  | b. | Discuss the importance of negative sequence relay. | | CO1 | | 10 |
| (OR) | | | | | | |
| 4. |  | With the help of a neat diagram explain about the construction and working of Induction type directional power relay. | | CO1 | | 20 |
|  |  |  | |  | |  |
| 5. | a. | Differentiate Bulk oil and Minimum oil circuit breaker. Discuss its constructional features. | | CO3 | | 15 |
|  | b. | Write short notes on Recovery voltage and Restriking voltage | | CO3 | | 5 |
| (OR) | | | | | | |
| 6. |  | Explain the operation principle, construction and working of a SF6 circuit breaker. Also give the advantages of SF6 gas. | | CO3 | | 20 |
|  |  |  | |  | |  |
| 7. |  | Discuss about the lightning phenomenon with a suitable diagram. | | CO2 | | 20 |
| (OR) | | | | | | |
| 8. |  | Explain the operation of any three types of lightning arresters with neat sketches. | | CO2 | | 20 |
|  | |  | |  | |  |
|  | | **Compulsory**: | |  | |  |
| 9. | a. | Discuss in detail insulation levels of various substation equipments. | | CO2 | | 15 |
|  | b. | Write short notes on earthing of appliances. | | CO2 | | 5 |

ALL THE BEST