|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Period** | **Time (min)** | **Teaching Method** | **Topic to be Covered** | **Unit** |
| 1. | 1. | 55min | Blackboard | Introductiontoswitchgear | 1 |
| 2. | 2. | 55min | Blackboard | Essentialfeaturesofswitchgear | 1 |
| 3. | 3. | 55min | Blackboard | Switchgearequipment | 1 |
| 4. | 4. | 55min | Blackboard | Bus–bararrangement | 1 |
| 5. | 5. | 55min | Blackboard | Switchgearaccommodation | 1 |
| 6. | 6. | 55min | Blackboard | Shortcircuit | 1 |
| 7. | 7. | 55min | Blackboard | Faultsinapowersystem | 1 |
| 8. | 8. | 55min | Blackboard | Symmetricalfaultson3-phasesystem | 2 |
| 9. | 9. | 55min | Blackboard | Limitationoffaultcurrent | 2 |
| 10. | 10. | 55min | Blackboard | Percentagereactance | 2 |
| 11. | 11. | 55min | Blackboard | PercentagereactanceandbaseKVA | 2 |
| 12. | 12. | 55min | Blackboard | Short-circuitKVA | 2 |
| 13. | 13. | 55min | Blackboard | Reactorcontrolofshortcircuitcurrents | 2 |
| 14. | 14. | 55min | Blackboard | Locationofreactors | 2 |
| 15. | 15. | 55min | Blackboard | Stepsforsymmetricalfaultcalculations | 2 |
| 16. | 16. | 55min | Blackboard | Numericalproblemssolving | 2 |
| 17. | 17. | 55min | Blackboard | Numericalproblemssolving | 2 |
| 18. | 18. | 55min | Blackboard | Desirablecharacteristicsoffuseelement | 3 |
| 19. | 19. | 55min | Blackboard | Fuseelementmaterials | 3 |
| 20. | 20. | 55min | Blackboard | Typesoffusesandimportanttermsusedforfuses | 3 |
| 21. | 21. | 55min | Blackboard | Lowandhighvoltagefuses | 3 |
| 22. | 22. | 55min | Blackboard | Currentcarryingcapacityoffuseelement | 3 |
| 23. | 23. | 55min | Blackboard | Difference between a fuse and circuit breaker | 3 |
| 24. | 24. | 55min | Blackboard | Definitionandprincipleofcircuitbreaker | 4 |
| 25. | 25. | 55min | Blackboard | Arcphenomenonandprincipleofarcextinction | 4 |
| 26. | 26. | 55min | Blackboard | Methodsofarcextinction | 4 |
| 27. | 27. | 55min | Blackboard | Arcvoltage,Re-strikingvoltageandrecoveryvoltage | 4 |
| 28. | 28. | 55min | Blackboard | Classificationofcircuitbreakers | 4 |
| 29. | 29. | 55min | Projector | Oilcircuitbreakeranditsclassification | 4 |

|  |  |
| --- | --- |
| LESSON PLAN | |
| JHARSUGUDAENGINEERINGSCHOOL,JHARSUGUDA | |
| Academic Year: 2023-24 | Name of the Faculty: Soumya Souraja Panda |
| Course name: Switch Gear and Protective Devices | Course No.: EET 601 |
| Branch:Electrical | Program:Diploma |
| Section: | Year/Sem: 3rd/6th |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 30. | 30. | 55min | Projector | Plainbrakeoilcircuitbreaker | 4 |
| 31. | 31. | 55min | Projector | Arccontroloilcircuitbreaker | 4 |
| 32. | 32. | 55min | Projector | Lowoilcircuitbreaker | 4 |
| 33. | 33. | 55min | Projector | Maintenanceofoilcircuitbreaker | 4 |
| 34. | 34. | 55min | Projector | Airblastcircuitbreaker | 4 |
| 35. | 35. | 55min | Projector | SF6circuitbreaker | 4 |
| 36. | 36. | 55min | Projector | Vacuumcircuitbreaker | 4 |
| 37. | 37. | 55min | Blackboard | Switchgearcomponent | 4 |
| 38. | 38. | 55min | Blackboard | Resistanceswitching | 4 |
| 39. | 39. | 55min | Blackboard | Protectiverelayandit’srequirement | 5 |
| 40. | 40. | 55min | Blackboard | Basicrelayoperationandit’stypes | 5 |
| 41. | 41. | 55min | Blackboard | Importanttermsofrelay | 5 |
| 42. | 42. | 55min | Blackboard | Overcurrentanddirectionalrelay | 5 |
| 43. | 43. | 55min | Blackboard | Differentialrelay | 5 |
| 44. | 44. | 55min | Blackboard | Typesofprotection | 5 |
| 45. | 45. | 55min | Blackboard | Protection of alternator | 6 |
| 46. | 46. | 55min | Blackboard | Protectionoftransformer | 6 |
| 47. | 47. | 55min | Blackboard | Protectionofbusbar | 6 |
| 48. | 48. | 55min | Blackboard | Protection oftransmission line | 6 |
| 49. | 49. | 55min | Blackboard | Differential pilot wire protection | 6 |
| 50. | 50. | 55min | Blackboard | Voltagesurgeandcausesofovervoltage | 7 |
| 51. | 51. | 55min | Blackboard | Internalandexternalcauseofovervoltage | 7 |
| 52. | 52. | 55min | Blackboard | Mechanismoflightningarrester | 7 |
| 53. | 53. | 55min | Blackboard | Typesoflightningstrokes | 7 |
| 54. | 54. | 55min | Blackboard | Surgeabsorber | 7 |
| 55. | 55. | 55min | Blackboard | Harmfuleffectoflightning | 7 |
| 56. | 56. | 55min | Blackboard | Advantageofstaticrelay | 8 |
| 57. | 57. | 55min | Blackboard | Instantaneousovercurrentrelay | 8 |
| 58. | 58. | 55min | Blackboard | PrincipleofIDMTrelay | 8 |
| 59. | 59. | 55min | Blackboard | Revisionofalltopics |  |
| 60. | 60. | 55min | Blackboard | Revisionofalltopics |  |